

# Sequence Listing

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 Baker, Kevin P.  
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 Desnoyers, Luc  
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 Gerritsen, Mary E.  
 Goddard, Audrey  
 Godowski, Paul J.  
 Grimaldi, J. Christopher  
 Gurney, Austin L.  
 Kljavin, Ivar J.  
 Napier, Mary A.  
 Pan, James  
 Paoni, Nicholas F.  
 Roy, Margaret Ann  
 Stewart, Timothy A.  
 Tumas, Daniel  
 Watanabe, Colin K.  
 Williams, P. Mickey  
 Wood, William I.  
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caatggagctt gggaggaaga aattttctat ccacacctca gttttgttac 800  
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 <211> 251  
 <212> PRT  
 <213> Homo sapiens

<400> 6  
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 Arg Tyr Trp Phe Ala Ala Thr Val Ala Val Pro Leu Val Gly Lys  
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 Leu Gly Leu Ile Ser Pro Ala Tyr Leu Phe Leu Trp Pro Glu Ala  
 35 40 45  
 Phe Leu Tyr Arg Phe Gln Ile Trp Arg Pro Ile Thr Ala Thr Phe  
 50 55 60  
 Tyr Phe Pro Val Ser Gly Pro Gly Thr Gly Phe Leu Tyr Leu Val Asn  
 65 70 75  
 Leu Tyr Phe Leu Tyr Gln Tyr Ser Thr Arg Leu Glu Thr Gly Ala  
 80 85 90  
 Phe Asp Gly Arg Pro Ala Asp Tyr Leu Phe Met Leu Leu Phe Asn  
 95 100 105

Trp Ile Cys Ile Val Ile Thr Gly Leu Ala Met Asp Met Gln Leu  
 110 115 120  
 Leu Met Ile Pro Leu Ile Met Ser Val Leu Tyr Val Trp Ala Gln  
 125 130 135  
 Leu Asn Arg Asp Met Ile Val Ser Phe Trp Phe Gly Thr Arg Phe  
 140 145 150  
 Lys Ala Cys Tyr Leu Pro Trp Val Ile Leu Gly Phe Asn Tyr Ile  
 155 160 165  
 Ile Gly Gly Ser Val Ile Asn Glu Leu Ile Gly Asn Leu Val Gly  
 170 175 180  
 His Leu Tyr Phe Phe Leu Met Phe Arg Tyr Pro Met Asp Leu Gly  
 185 190 195  
 Gly Arg Asn Phe Leu Ser Thr Pro Gln Phe Leu Tyr Arg Trp Leu  
 200 205 210  
 Pro Ser Arg Arg Gly Gly Val Ser Gly Phe Gly Val Pro Pro Ala  
 215 220 225  
 Ser Met Arg Arg Ala Ala Asp Gln Asn Gly Gly Gly Gly Arg His  
 230 235 240  
 Asn Trp Gly Gln Gly Phe Arg Leu Gly Asp Gln  
 245 250

<210> 7  
 <211> 1373  
 <212> DNA  
 <213> Homo sapiens

<400> 7  
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 ctcttccctc actccctctc ggctccttgt ggcccaaagg cctaaccggg 150  
 gtccggcggt ctggcctagg gatcttcccc gttgccctt tggggcgggg 200  
 tggctgcgga agaagaagac gaggtggagt gggtagtgga gagcatcgcg 250  
 gggttctcgc gaggccaga ctggtccatc cccatcttgg actttgtgga 300  
 acagaaatgt gaagttaact gcaaaggagg gcatgtgata actccaggaa 350  
 gccagagacc ggtgattttg gtggcctgtg tcccccttgt ttttgatgat 400  
 gaagaagaaa gcaaatgtac ctatacagag attcatcagg aatacaaga 450  
 actagtgtgaa aagctgttag aaggttacct caaagaaatt ggaattaatg 500  
 aagatcaatt tcaagaagca tgcacttctc ctcttgcaaa gaccatata 550  
 tcacaggcca ttttgcaacc tgtgttgga gcagaagatt ttactatctt 600  
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 ggaaaaaaca gttatcagag gctaaaacag aagagccac agtgattcc 850  
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 acaccacccc tcagaagtta aatgcattt tgctaatacag tcaatagaac 950  
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 tcaagcagaa gagagataag ttgatgtcca tgagaaagga tatgaggact 1150  
 aaacagatac aaaaatgga gcagaaagga aaacccactg gggaggtaga 1200  
 ggaaatgaca gagaaccag aatgacagc agaggagaag caaacattac 1250  
 taaagaggag attgcttgca gagaactca aagaagaagt tattaataag 1300  
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 taaattattt agtccttaca ctg 1373

<210> 8  
 <211> 367  
 <212> PRT  
 <213> Homo sapiens

<400> 8  
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 20 25 30  
 Asp Phe Val Glu Gln Lys Cys Glu Val Asn Cys Lys Gly Gly His  
 35 40 45  
 Val Ile Thr Pro Gly Ser Pro Glu Pro Val Ile Leu Val Ala Cys  
 50 55 60  
 Val Pro Leu Val Phe Asp Asp Glu Glu Glu Ser Lys Leu Thr Tyr  
 65 70 75  
 Thr Glu Ile His Gln Glu Tyr Lys Glu Leu Val Glu Lys Leu Leu  
 80 85 90  
 Glu Gly Tyr Leu Lys Glu Ile Gly Ile Asn Glu Asp Gln Phe Gln  
 95 100 105  
 Glu Ala Cys Thr Ser Pro Leu Ala Lys Thr His Thr Ser Gln Ala  
 110 115 120  
 Ile Leu Gln Pro Val Leu Ala Ala Glu Asp Phe Thr Ile Phe Lys  
 125 130 135  
 Ala Met Met Val Gln Lys Asn Ile Glu Met Gln Leu Gln Ala Ile  
 140 145 150

Arg Ile Ile Gln Glu Arg Asn Gly Val Leu Pro Asp Cys Leu Thr  
 155 160  
 Asp Gly Ser Asp Val Val Ser Asp Leu Glu His Glu Glu Met Lys  
 170 175 180  
 Ile Leu Arg Glu Val Leu Arg Lys Ser Lys Glu Glu Tyr Asp Gln  
 185 190 195  
 Glu Glu Glu Arg Lys Arg Lys Lys Gln Leu Ser Glu Ala Lys Thr  
 200 205 210  
 Glu Glu Pro Thr Val His Ser Ser Glu Ala Ala Ile Met Asn Asn  
 215 220 225  
 Ser Gln Gly Asp Gly Glu His Phe Ala His Pro Pro Ser Glu Val  
 230 235 240  
 Lys Met His Phe Ala Asn Gln Ser Ile Glu Pro Leu Gly Arg Lys  
 245 250 255  
 Val Glu Arg Ser Glu Thr Ser Ser Leu Pro Gln Lys Gly Leu Lys  
 260 265 270  
 Ile Pro Gly Leu Glu His Ala Ser Ile Glu Gly Pro Ile Ala Asn  
 275 280 285  
 Leu Ser Val Leu Gly Thr Glu Glu Leu Arg Gln Arg Glu His Tyr  
 290 295 300  
 Leu Lys Gln Lys Arg Asp Lys Leu Met Ser Met Arg Lys Asp Met  
 305 310 315  
 Arg Thr Lys Gln Ile Gln Asn Met Glu Gln Lys Gly Lys Pro Thr  
 320 325 330  
 Gly Glu Val Glu Glu Met Thr Glu Lys Pro Glu Met Thr Ala Glu  
 335 340 345  
 Glu Lys Gln Thr Leu Leu Lys Arg Arg Leu Leu Ala Glu Lys Leu  
 350 355 360  
 Lys Glu Glu Val Ile Asn Lys  
 365

<210> 9  
 <211> 418  
 <212> DNA  
 <213> Homo sapiens

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 ctatacacag attcatcagg aatacaaaga actagtgtgaa aagctgttag 100  
 aaggttacct caaagaattt ggaattaatg aagatcaatt tcaagaagca 150  
 tgcacttctc ctcttgcaaa gaccataca tcacaggcca tttttgcaac 200  
 ctgtgttggc agcagaagt tttactatct ttaaagcaat gatggtccag 250  
 aaaaacattg aaatgcagct gcaagccatt cgaataattc aagagagaaa 300

tggtgtatta cctgactgct taaccgatgg ctctgatgtg gtcagtgacc 350  
ttgaacacga agagatgaaa atcctgaggg aagttcttag aaatcaaaa 400  
gaggaatatg accaggaa 418

<210> 10  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 10  
ttgacctata cagagattca tc 22

<210> 11  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 11  
ctaagaactt ccctcaggat ttt 23

<210> 12  
<211> 40  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 12  
atgaagatca atttcaagaa gcatgcactt ctctctttgc 40

<210> 13  
<211> 2886  
<212> DNA  
<213> Homo sapiens

<400> 13  
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tactacgggg ctagacagtt actgtctcag ctctaggatg tgcgttcttc 150  
cactagaagc tcttctgagg gaggtaatta aaaaacagtg gaatggaaaa 200  
acagtgcgtg agtcacacctg taatatgctc ctgtcaaca atgtatacat 250  
tctgtctagg tgccatatct attgctttaa gctcaagtcg catcttacta 300  
gtgaagtatt ctgccaatga agaaaacaag tatgattatc ttccaactac 350  
tgtgaatgtg tgctcagaac tggatgaagct agttttctgt gtgcttgtgt 400  
cattctgtgt tataaagaaa gatcatcaaa gtgaaaattt gaaatatgct 450



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 cagccatggc tgttatcttc tcaaatttta gcattataac aacagctctt 600  
 ctattcagga tagtgctgaa gaggcgtcta aactggatcc agtgggcttc 650  
 cctcctgact ttatttttgt ctattgtggc ctgactgccc gggaactaaa 700  
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 caattgtaca gcaaaggaat ggacttttcc tgaagctaaa tggaacacca 850  
 cagccagagt ttccagtcac atccgtcttg gcatgggcca tgttcttatt 900  
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<210> 14  
 <211> 424  
 <212> PRT  
 <213> Homo sapiens

<400> 14  
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 Thr Met Tyr Thr Phe Leu Leu Gly Ala Ile Phe Ile Ala Leu Ser  
 20 25 30  
 Ser Ser Arg Ile Leu Leu Val Lys Tyr Ser Ala Asn Glu Glu Asn  
 35 40 45  
 Lys Tyr Asp Tyr Leu Pro Thr Thr Val Asn Val Cys Ser Glu Leu  
 50 55 60  
 Val Lys Leu Val Phe Cys Val Leu Val Ser Phe Cys Val Ile Lys  
 65 70 75  
 Lys Asp His Gln Ser Arg Asn Leu Lys Tyr Ala Ser Trp Lys Glu  
 80 85 90  
 Phe Ser Asp Phe Met Lys Trp Ser Ile Pro Ala Phe Leu Tyr Phe  
 95 100 105  
 Leu Asp Asn Leu Ile Val Phe Tyr Val Leu Ser Tyr Leu Gln Pro  
 110 115 120

Ala Met Ala Val Ile Phe Ser Asn Phe Ser Ile Ile Thr Thr Ala  
 125 130  
 Leu Leu Phe Arg Ile Val Leu Lys Arg Arg Leu Asn Trp Ile Gln  
 140 145 150  
 Trp Ala Ser Leu Leu Thr Leu Phe Leu Ser Ile Val Ala Leu Thr  
 155 160 165  
 Ala Gly Thr Lys Thr Leu Gln His Asn Leu Ala Gly Arg Gly Phe  
 170 175 180  
 His His Asp Ala Phe Phe Ser Pro Ser Asn Ser Cys Leu Leu Phe  
 185 190 195  
 Arg Ser Glu Cys Pro Arg Lys Asp Asn Cys Thr Ala Lys Glu Trp  
 200 205 210  
 Thr Phe Pro Glu Ala Lys Trp Asn Thr Thr Ala Arg Val Phe Ser  
 215 220 225  
 His Ile Arg Leu Gly Met Gly His Val Leu Ile Ile Val Gln Cys  
 230 235 240  
 Phe Ile Ser Ser Met Ala Asn Ile Tyr Asn Glu Lys Ile Leu Lys  
 245 250 255  
 Glu Gly Asn Gln Leu Thr Glu Ser Ile Phe Ile Gln Asn Ser Lys  
 260 265 270  
 Leu Tyr Phe Phe Gly Ile Leu Phe Asn Gly Leu Thr Leu Gly Leu  
 275 280 285  
 Gln Arg Ser Asn Arg Asp Gln Ile Lys Asn Cys Gly Phe Phe Tyr  
 290 295 300  
 Gly His Ser Ala Phe Ser Val Ala Leu Ile Phe Val Thr Ala Phe  
 305 310 315  
 Gln Gly Leu Ser Val Ala Phe Ile Leu Lys Phe Leu Asp Asn Met  
 320 325 330  
 Phe His Val Leu Met Ala Gln Val Thr Thr Val Ile Ile Thr Thr  
 335 340 345  
 Val Ser Val Leu Val Phe Asp Phe Arg Pro Ser Leu Glu Phe Phe  
 350 355 360  
 Leu Glu Ala Pro Ser Val Leu Leu Ser Ile Phe Ile Tyr Asn Ala  
 365 370 375  
 Ser Lys Pro Gln Val Pro Glu Tyr Ala Pro Arg Gln Glu Arg Ile  
 380 385 390  
 Arg Asp Leu Ser Gly Asn Leu Trp Glu Arg Ser Ser Gly Asp Gly  
 395 400 405  
 Glu Glu Leu Glu Arg Leu Thr Lys Pro Lys Ser Asp Glu Ser Asp  
 410 415 420  
 Glu Asp Thr Phe

<210> 15  
<211> 755  
<212> DNA  
<213> Homo sapiens

<400> 15  
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ctatacctac tgtagcttct ccacgtatgg accctaaagg ctactgtctg 150  
tactacgggg ctagacagtt actgtctcag ctctaggatg tgcgtttctt 200  
cactagaagc tcttctgagg gaggttaatta aaaaacagtg gaatggaaaa 250  
acagtgtgtg agtcatcctg taatatgctc cttgtcaaca atgtatacat 300  
tcctgctagg tgccatatct attgctttta gctcaagtcg catcttacta 350  
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tgtgaatgtg tgctcagaac tgggtgaagct agttttctgt gtgcttgtgt 450  
cattctgtgt tataaagaaa gatcatcaaa gtagaaattt gaaatatgct 500  
tcctggaagg aattctctga tttcatgaag tgggtccattc ctgcctttct 550  
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cagccatggc tgttatcttc tcaaatttta gcattataac aacagctctt 650  
ctattcagga tagtgcgtgaa gaggcgtcta aactggatcc agtgggcttc 700  
cctcctgact ttatttttgt ctattgtggc cttgactgcc gggactaaaa 750  
cttta 755

<210> 16  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 16  
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<210> 17  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 17  
tcagagaatt ccttccagga 20

<210> 18  
<211> 40  
<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 18

acagtgtgtg agtcatcctg taatatgctc cttgtcaaca 40

<210> 19

<211> 2142

<212> DNA

<213> Homo sapiens

<400> 19

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gcggcctcgc gggcagagga gcatcccgtc taccagtgcc caagcggcgt 150  
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gcctacttcc ggggcctacg gctgtcatg agccacggcc catatcatca 1050  
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ggaaacttgt cttgttttgc acctacacct tgggcttcgg caatgaattc 1150  
cagaatctac tcttgccat catgctctcg gccactttaa ccattcccat 1200  
ctggcagtggt ttcttgacct ggtttggcaa gaagacagct gtatatgttg 1250

ggatctcatc agcagtgcca ttctcatct tgggtggcct catggagagt 1300  
 aacctcatca ttacatatgc ggtagctgtg gcagctggca tcagtggtgc 1350  
 agctgccttc ttactaccct ggtccatgct gctgatgtc attgacgact 1400  
 tccatctgaa gcagcccccac ttccatggaa ccgagcccat cttctctcc 1450  
 ttctatgtct tcttcaccaa gtttgccctt ggagtgtcac tgggcatttc 1500  
 taccctcagt ctggaacttg cagggtacca gaccogtggc tgctcgagc 1550  
 cggaacgtgt caagtttaca ctgaacatgc tcgtgacctt ggctcccata 1600  
 gttctcatcc tgctgggctt gctgctcttc aaaatgtacc ccattgatga 1650  
 ggagaggcgg cggcagaata agaaggccct gcaggcactg agggacgagg 1700  
 ccagcagctc tggctgctca gaaacagact ccacagagct ggctagcatc 1750  
 ctctagggcc cgccacgttg ccgaagcca ccatgcagaa ggccacagaa 1800  
 gggatcagga cctgtctgcc ggcttgctga gcagctggac tgcagtgct 1850  
 aggaagggaa ctgaagactc aaggaggtgg ccaggacac ttgctgtgct 1900  
 cactgtgggg cggctgctc tgtggcctcc tgcctccct ctgctgcct 1950  
 gtggggccaa gccctggggc tgccactgtg aatatgccaa ggactgatcg 2000  
 ggcttagccc ggaacactaa ttagaaaacc tttttttac agagccta 2050  
 taataactta atgactgtgt acatagcaat gtgtgtgtat gtatatgtct 2100  
 gtgagctatt aatgttatta attttcataa aagctggaaa gc 2142

<210> 20  
 <211> 458  
 <212> PRT  
 <213> Homo sapiens

<400> 20  
 Met Trp Leu Arg Trp Ala Leu Ser Leu Pro Pro Ser Ser Cys Leu  
 1 5 10 15  
 Trp Ala Glu Pro Gly Met Pro Ser Gln Thr Pro Trp Trp Ala Ser  
 20 25 30  
 Ala Ser Ala Asn Pro Pro Gly Pro Ala Trp Val Ala Leu Cys Pro  
 35 40 45  
 Gly Ser Ser Ser Pro Arg Pro Trp Pro Ser Leu Pro Thr Ser Ser  
 50 55 60  
 Ser Gly Ser Cys Pro Thr Ser His Thr Ala Arg Pro Ile Gly Thr  
 65 70 75  
 Cys Phe Ser Ile Ala Ser Leu Lys Gln Trp Ser Arg Val Ser Met  
 80 85 90  
 Phe Pro Thr Arg Leu Ser Pro Cys Ser Ser Ala Thr Glu Gln Thr  
 95 100 105

Glu Arg Asp Ser Ala Thr Ala Tyr Arg Met Thr Val Glu Val Leu  
 110 115 120  
 Gly Thr Val Leu Gly Thr Ala Ile Gln Gly Gln Ile Val Gly Gln  
 125 130 135  
 Ala Asp Thr Pro Cys Phe Gln Asp Phe Asn Ser Ser Thr Val Ala  
 140 145 150  
 Ser Gln Ser Ala Asn His Thr His Gly Thr Thr Ser His Arg Glu  
 155 160 165  
 Thr Gln Lys Ala Tyr Leu Leu Ala Ala Gly Val Ile Val Cys Ile  
 170 175 180  
 Tyr Ile Ile Cys Ala Val Ile Leu Ile Leu Gly Val Arg Glu Gln  
 185 190 195  
 Arg Glu Pro Tyr Glu Ala Gln Gln Ser Glu Pro Ile Ala Tyr Phe  
 200 205 210  
 Arg Gly Leu Arg Leu Val Met Ser His Gly Pro Tyr Ile Lys Leu  
 215 220 225  
 Ile Thr Gly Phe Leu Phe Thr Ser Leu Ala Phe Met Leu Val Glu  
 230 235 240  
 Gly Asn Phe Val Leu Phe Cys Thr Tyr Thr Leu Gly Phe Arg Asn  
 245 250 255  
 Glu Phe Gln Asn Leu Leu Leu Ala Ile Met Leu Ser Ala Thr Leu  
 260 265 270  
 Thr Ile Pro Ile Trp Gln Trp Phe Leu Thr Arg Phe Gly Lys Lys  
 275 280 285  
 Thr Ala Val Tyr Val Gly Ile Ser Ser Ala Val Pro Phe Leu Ile  
 290 295 300  
 Leu Val Ala Leu Met Glu Ser Asn Leu Ile Ile Thr Tyr Ala Val  
 305 310 315  
 Ala Val Ala Ala Gly Ile Ser Val Ala Ala Phe Leu Leu Pro  
 320 325 330  
 Trp Ser Met Leu Pro Asp Val Ile Asp Asp Phe His Leu Lys Gln  
 335 340 345  
 Pro His Phe His Gly Thr Glu Pro Ile Phe Phe Ser Phe Tyr Val  
 350 355 360  
 Phe Phe Thr Lys Phe Ala Ser Gly Val Ser Leu Gly Ile Ser Thr  
 365 370 375  
 Leu Ser Leu Asp Phe Ala Gly Tyr Gln Thr Arg Gly Cys Ser Gln  
 380 385 390  
 Pro Glu Arg Val Lys Phe Thr Leu Asn Met Leu Val Thr Met Ala  
 395 400 405  
 Pro Ile Val Leu Ile Leu Leu Gly Leu Leu Leu Phe Lys Met Tyr  
 410 415 420

Pro Ile Asp Glu Glu Arg Arg Arg Gln Asn Lys Lys Ala Leu Gln  
 425 430  
 Ala Leu Arg Asp Glu Ala Ser Ser Ser Gly Cys Ser Glu Thr Asp  
 440 445 450  
 Ser Thr Glu Leu Ala Ser Ile Leu  
 455

<210> 21  
 <211> 571  
 <212> DNA  
 <213> Homo sapiens

<400> 21  
 gggaaacgca aaaggcatac ctgctggcag cgggggtcat tgtctgtatc 50  
 tataatact gtgctgtcat cctgatcctg ggcgtgcggg agcagagaga 100  
 accctatgaa gccacgacgt ctgagccaat cgcctacttc cggggcctac 150  
 ggctgggtcat gagccacggc ccatacatca aacttattac tggcttcctc 200  
 ttccacctct tggctttcat gctggtggag gggaaacttg tcttgttttg 250  
 cacctacacc ttgggcttcc gcaatgaatt ccagaatcta ctccctggcca 300  
 tcatgtctct ggccacttta accattccca tctggcagtg gttcttgacc 350  
 cggtttgcca agaagacagc tgtatatgtt gggatctcat cagcagtgcc 400  
 atttctcatc ttggtggccc tcatggagag taacctcatc attacatatg 450  
 cggtagctgt ggcagctggc atcagtggtg cagctgcctt cttactaccc 500  
 tggtcacatc tgccctgatg cattgacgac ttccatctga agcagcccca 550  
 cttccatgga accgagccca t 571

<210> 22  
 <211> 1173  
 <212> DNA  
 <213> Homo sapiens

<400> 22  
 ggggcttcgg cgccagcggc cagcgctagt cggctctgga aggatttaca 50  
 aaaggtgcoag gtatgagcag gtctgaagac taacattttg tgaagttgta 100  
 aaacagaaaa cctgttagaa atgtggtggt ttcagcaagg cctcagtttc 150  
 cttccttcag ccttgttaat ttggacatct gctgctttca tattttcata 200  
 cattaactgca gtaacactcc accatataga ccgggtttta ccttatatca 250  
 gtgacaactgg tacagtagct ccagaaaaat gcttatttgg ggcaatgcta 300  
 aatattgcgg cagttttatg cattgctacc atttatgttc gttataagca 350  
 agttcatgct ctgagtcctg aagagaacgt tatcatcaaa ttaacaagg 400  
 ctggccctgt acttgaata ctgagttggt taggactttc tattgtggca 450



aacttccaga aaacaaccct ttttctgca catgtaagt gagctgtgct 500  
tacctttggt atgggctcat tatatatgtt tgttcagacc atcctttcct 550  
accaaagtca gcccaaatc catggcaaac aagtcttctg gatcagactg 600  
ttgttggtta tctggtgtgg agtaagtga cttagcatgc tgacttgctc 650  
atcagttttg cacagtggca attttgggac tgatttagaa cagaaactcc 700  
attggaaccc cgaggacaaa ggttatgtgc ttcacatgat cactactgca 750  
gcagaatggt ctatgtcatt ttcttctttt ggttttttcc tgacttacat 800  
tcgtgatatt cagaaaattt ctttacgggt ggaagccaat ttacatggat 850  
taacctctta tgacactgca ccttgcccta ttaacaatga acgaacacgg 900  
ctactttcca gagatatatt atgaaaggat aaaatatttc tgtaagtatt 950  
atgattctca gggattgggg aaagggtcac agaagttgct tattcttctc 1000  
tgaaattttc aaccacttaa tcaaggctga cagtaacact gatgaatgct 1050  
gataatcagg aaacatgaaa gaagccattt gatagattat tctaaaggat 1100  
atcatcaaga agactattaa aaacacctat gcctatactt ttttatctca 1150  
gaaaataaag tcaaaagact atg 1173

<210> 23  
<211> 266  
<212> PRT  
<213> Homo sapiens

<400> 23  
Met Trp Trp Phe Gln Gln Gly Leu Ser Phe Leu Pro Ser Ala Leu  
1 5 10 15  
Val Ile Trp Thr Ser Ala Ala Phe Ile Phe Ser Tyr Ile Thr Ala  
20 25 30  
Val Thr Leu His His Ile Asp Pro Ala Leu Pro Tyr Ile Ser Asp  
35 40 45  
Thr Gly Thr Val Ala Pro Glu Lys Cys Leu Phe Gly Ala Met Leu  
50 55 60  
Asn Ile Ala Ala Val Leu Cys Ile Ala Thr Ile Tyr Val Arg Tyr  
65 70 75  
Lys Gln Val His Ala Leu Ser Pro Glu Glu Asn Val Ile Ile Lys  
80 85 90  
Leu Asn Lys Ala Gly Leu Val Leu Gly Ile Leu Ser Cys Leu Gly  
95 100 105  
Leu Ser Ile Val Ala Asn Phe Gln Lys Thr Thr Leu Phe Ala Ala  
110 115 120  
His Val Ser Gly Ala Val Leu Thr Phe Gly Met Gly Ser Leu Tyr  
125 130 135

Met Phe Val Gln Thr Ile Leu Ser Tyr Gln Met Gln Pro Lys Ile  
 140 145 150  
 His Gly Lys Gln Val Phe Trp Ile Arg Leu Leu Val Ile Trp  
 155 160 165  
 Cys Gly Val Ser Ala Leu Ser Met Leu Thr Cys Ser Ser Val Leu  
 170 175 180  
 His Ser Gly Asn Phe Gly Thr Asp Leu Glu Gln Lys Leu His Trp  
 185 190 195  
 Asn Pro Glu Asp Lys Gly Tyr Val Leu His Met Ile Thr Thr Ala  
 200 205 210  
 Ala Glu Trp Ser Met Ser Phe Ser Phe Phe Gly Phe Phe Leu Thr  
 215 220 225  
 Tyr Ile Arg Asp Phe Gln Lys Ile Ser Leu Arg Val Glu Ala Asn  
 230 235 240  
 Leu His Gly Leu Thr Leu Tyr Asp Thr Ala Pro Cys Pro Ile Asn  
 245 250 255  
 Asn Glu Arg Thr Arg Leu Leu Ser Arg Asp Ile  
 260 265

<210> 24  
 <211> 485  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 14, 484  
 <223> unknown base

<400> 24  
 cggacgcttg ggcnegcgcca gcggccagcg ctagtcgggc tggtaagtgc 50  
 ctgatgccga gttcogtctc tcgggtcttt tctggtccc aggcacagcg 100  
 gagcggagat cctcaaacgg cctagtgott cgcgcttcog gagaaaatca 150  
 gcggtctaata taattcctct ggtttgttga agcagttacc aagaatcttc 200  
 aaccctttcc cacaaaagct aattgagtac acgttctgt tgagtacacg 250  
 ttctgttga ttacaaaag gtgcaggtat gagcaggtct gaagactaac 300  
 attttgtgaa gttgtaaaac agaaaacctg ttagaaatgt ggtggtttc 350  
 gcaaggcctc agtttccttc cttcagccct tgtaatttgg acatctgctg 400  
 ctttcatatt ttcatacatt actgcagtaa cactccacca tatagaccog 450  
 gotttacctt atatcagtga caotggtaca gtanc 485

<210> 25  
 <211> 40  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe  
 <400> 25  
 acctgttaga aatgtggtgg ttccagcaag gcttcagttt 40

<210> 26  
 <211> 46  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe  
 <400> 26  
 ggagatagct gctatgggtt cttcaggcac aacttaacat gggaag 46

<210> 27  
 <211> 1399  
 <212> DNA  
 <213> Homo sapiens

<400> 27  
 cccacgcgtc cgcccgccgc tgcgtcccgc agtgcgaagt agcttctcgc 50  
 ctgccccgcg ggcgggggtg cggagccgac atgcgccgcg ttctcgccct 100  
 ccttctggtc ttgcgcggtc gcaccttcgc cttgtacttg ctgtcgagcg 150  
 gactgccccg cgggcgggaga ctgggctcca ccgaggaggc tggaggcagg 200  
 tcgctgtggt tccctccga cctggcagag ctgcgggagc tctctgaggt 250  
 ccttcgagag taccggaagg agcaccaggc ctacgtgttc ctgctcttct 300  
 gcggcgccga cctctacaaa cagggctttg ccattccccc ctcagcttc 350  
 ctgaatgttt tagctggtgc cttgtttggg ccattggtgg ggcttctgct 400  
 gtgctgtgtg ttgacctcgg tgggtgccac atgctgtcac ctgctctcca 450  
 gtattttttg caaacagttg gtggtgtcct accttcctga taaagtggcc 500  
 ctgctgcaga gaaagtgga ggagaacaga aacagcttgt tttttttctt 550  
 attgtttttg agacttttcc ccattgacacc aaactgggtc ttgaacctct 600  
 cggccccaat tctgaacatt cccatcgtgc agttcttctt ctcagttctt 650  
 atcggtttga toccatataa ttcatctgt gtgcagacag ggtccatcct 700  
 gtcaacccta acctctctgg atgctotttt ctctcgggac actgtcttta 750  
 agctgtttgc cattgcoatg gtggcattaa ttcttggaac cctcattaaa 800  
 aaatttagtc agaaacatct gcaattgaat gaaacaagta ctgctaata 850  
 tatacacagt agaaaagaca catgatctgg attttctgtt tgccaatcc 900  
 ctggactcag ttgcttatt gtgtaatgga tgtggctctc taaagccct 950  
 cattgttttt gattgccttc tataggtgat gtggacactg tgcataatg 1000

tgcagtgtct ttccagaaag gacactctgc tcttgaaggt gtattacatc 1050  
 aggttttcaa accagccctg gtgtagcaga cactgcaaca gatgcctcct 1100  
 agaaaatgct gtttgtggcc gggcgcggtg gctcacgcct gtaatcccag 1150  
 cactttggga ggccgaggcc ggtgattcac aaggtcagga gttcaagacc 1200  
 agcctggcca agatggtgaa atcctgtctc taataaaaaa acaaaaatta 1250  
 gccaggcggt gtggcaggca cctgtaatcc cagctactcg ggaggctgag 1300  
 gcaggagaat tgcttgaacc aaggtggcag aggttgacgt aagccaagat 1350  
 cacaccactg cactccagcc tgggtgatag agtgagacac tgtcttgac 1399

<210> 28  
 <211> 264  
 <212> PRT  
 <213> Homo sapiens

<400> 28  
 Met Arg Pro Leu Leu Gly Leu Leu Leu Val Phe Ala Gly Cys Thr  
 1 5 10 15  
 Phe Ala Leu Tyr Leu Leu Ser Thr Arg Leu Pro Arg Gly Arg Arg  
 20 25 30  
 Leu Gly Ser Thr Glu Glu Ala Gly Gly Arg Ser Leu Trp Phe Pro  
 35 40 45  
 Ser Asp Leu Ala Glu Leu Arg Glu Leu Ser Glu Val Leu Arg Glu  
 50 55 60  
 Tyr Arg Lys Glu His Gln Ala Tyr Val Phe Leu Leu Phe Cys Gly  
 65 70 75  
 Ala Tyr Leu Tyr Lys Gln Gly Phe Ala Ile Pro Gly Ser Ser Phe  
 80 85 90  
 Leu Asn Val Leu Ala Gly Ala Leu Phe Gly Pro Trp Leu Gly Leu  
 95 100 105  
 Leu Leu Cys Cys Val Leu Thr Ser Val Gly Ala Thr Cys Cys Tyr  
 110 115 120  
 Leu Leu Ser Ser Ile Phe Gly Lys Gln Leu Val Val Ser Tyr Phe  
 125 130 135  
 Pro Asp Lys Val Ala Leu Leu Gln Arg Lys Val Glu Glu Asn Arg  
 140 145 150  
 Asn Ser Leu Phe Phe Phe Leu Leu Phe Leu Arg Leu Phe Pro Met  
 155 160 165  
 Thr Pro Asn Trp Phe Leu Asn Leu Ser Ala Pro Ile Leu Asn Ile  
 170 175 180  
 Pro Ile Val Gln Phe Phe Phe Ser Val Leu Ile Gly Leu Ile Pro  
 185 190 195  
 Tyr Asn Phe Ile Cys Val Gln Thr Gly Ser Ile Leu Ser Thr Leu  
 200 205 210

Thr Ser Leu Asp Ala Leu Phe Ser Trp Asp Thr Val Phe Lys Leu  
 215 220  
 Leu Ala Ile Ala Met Val Ala Leu Ile Pro Gly Thr Leu Ile Lys  
 230 235 240  
 Lys Phe Ser Gln Lys His Leu Gln Leu Asn Glu Thr Ser Thr Ala  
 245 250 255  
 Asn His Ile His Ser Arg Lys Asp Thr  
 260

<210> 29  
 <211> 1292  
 <212> DNA  
 <213> Homo sapiens

<400> 29  
 ccgaggcggg aggagcccg gggggcgcg gcccgcgatg aatcattgta 50  
 gtcaatcatt ttccagttct cagccgctca gttgtgatca agggacacgt 100  
 gggttccgaa ctgccagctc agaataggaa aataacttgg gattttatat 150  
 tggaagacat ggatcttgct gccaacgaga tcagcattta tgacaaactt 200  
 tcagagactg ttgatttggt gagacagacc ggccatcagt gtggcatgtc 250  
 agagaaggca attgaaaaat ttatcagaca gctgctggaa aagaatgaac 300  
 ctccagagacc ccccccgag tatcctctcc ttatagtgt gtataagggt 350  
 ctccgaacct tgggattaat cttgctcact gcctactttg tgattcaacc 400  
 ttccagccca ttagcacctg agccagtgtc ttctggagct caccctggc 450  
 gctcactcat ccatcacatt aggctgatgt ccttgcccat tgccaagaag 500  
 tacatgtcag aaaataaggg agttcctctg catgggggtg atgaagacag 550  
 accctttcca gactttgacc cctgggtggac aaacgactgt gagcagaatg 600  
 agtcagagcc cattcctgcc aactgcactg gctgtgcca gaaacacctg 650  
 aaggtgatgc tcctggaaga cggcccaagg aaatttgaga ggctccatcc 700  
 actggtgatc aagacgggaa agcccctgtt ggaggaagag attcagcatt 750  
 ttttgtgcca gtaccctgag gcgacagaag gcttctctga agggtttttc 800  
 gccaaagtgt ggcgctgctt tcctgagcgg tggttccat ttcttatcc 850  
 atggaggaga cctctgaaca gatcacaaat gttacgtgag ctttttctcg 900  
 ttttcactca cctgccattt ccaaaagatg cctctttaa caagtgtctc 950  
 tttcttcacc cagaacctgt tgtggggagt aagatgcata agatgcctga 1000  
 cctatttacc attggcagcg gtgaggccat gttgcagctc atccctccot 1050  
 tccagtgccg aagacattgt cagtctgtgg ccatgccaat agagccaggg 1100  
 gatatcggtt atgtcgacac caccactg aggtctacg ttatagccag 1150

aggggtccag ctttgggtca tctgcatgg aacgccttc tcagaactgt 1200  
 aggaataga actgtgcaca ggaacagctt ccagagccga aaaccaggtt 1250  
 gaaaggggaa aaataaaaac aaaaacgatg aaactgcaaa aa 1292

<210> 30  
 <211> 347  
 <212> PRT  
 <213> Homo sapiens

<400> 30  
 Met Asp Leu Ala Ala Asn Glu Ile Ser Ile Tyr Asp Lys Leu Ser 15  
 1 5 10  
 Glu Thr Val Asp Leu Val Arg Gln Thr Gly His Gln Cys Gly Met 30  
 20 25  
 Ser Glu Lys Ala Ile Glu Lys Phe Ile Arg Gln Leu Leu Glu Lys 45  
 35 40  
 Asn Glu Pro Gln Arg Pro Pro Pro Gln Tyr Pro Leu Leu Ile Val 60  
 50 55  
 Val Tyr Lys Val Leu Ala Thr Leu Gly Leu Ile Leu Leu Thr Ala 75  
 65 70  
 Tyr Phe Val Ile Gln Pro Phe Ser Pro Leu Ala Pro Glu Pro Val 90  
 80 85  
 Leu Ser Gly Ala His Thr Trp Arg Ser Leu Ile His His Ile Arg 105  
 95 100  
 Leu Met Ser Leu Pro Ile Ala Lys Lys Tyr Met Ser Glu Asn Lys 120  
 110 115  
 Gly Val Pro Leu His Gly Gly Asp Glu Asp Arg Pro Phe Pro Asp 135  
 125 130  
 Phe Asp Pro Trp Trp Thr Asn Asp Cys Glu Gln Asn Glu Ser Glu 150  
 140 145  
 Pro Ile Pro Ala Asn Cys Thr Gly Cys Ala Gln Lys His Leu Lys 165  
 155 160  
 Val Met Leu Leu Glu Asp Ala Pro Arg Lys Phe Glu Arg Leu His 180  
 170 175  
 Pro Leu Val Ile Lys Thr Gly Lys Pro Leu Leu Glu Glu Glu Ile 195  
 185 190  
 Gln His Phe Leu Cys Gln Tyr Pro Glu Ala Thr Glu Gly Phe Ser 210  
 200 205  
 Glu Gly Phe Phe Ala Lys Trp Trp Arg Cys Phe Pro Glu Arg Trp 225  
 215 220  
 Phe Pro Phe Pro Tyr Pro Trp Arg Arg Pro Leu Asn Arg Ser Gln 240  
 230 235  
 Met Leu Arg Glu Leu Phe Pro Val Phe Thr His Leu Pro Phe Pro 255  
 245 250

Lys Asp Ala Ser Leu Asn Lys Cys Ser Phe Leu His Pro Glu Pro  
 260 265  
 Val Val Gly Ser Lys Met His Lys Met Pro Asp Leu Phe Ile Ile  
 275 280 285  
 Gly Ser Gly Glu Ala Met Leu Gln Leu Ile Pro Pro Phe Gln Cys  
 290 295 300  
 Arg Arg His Cys Gln Ser Val Ala Met Pro Ile Glu Pro Gly Asp  
 305 310 315  
 Ile Gly Tyr Val Asp Thr Thr His Trp Lys Val Tyr Val Ile Ala  
 320 325 330  
 Arg Gly Val Gln Pro Leu Val Ile Cys Asp Gly Thr Ala Phe Ser  
 335 340 345  
 Glu Leu

<210> 31  
 <211> 478  
 <212> DNA  
 <213> Homo sapiens

<400> 31  
 ccacggtgtc cgttcttcgc ccggcggcag ctgtcccca ggccgggagga 50  
 gcccgagggg cgcgagcccc gcatgaatca ttgtagtcaa tcattttcca 100  
 gttctcagcc gttcagttgt gatcaaggga cacgtggttt ccgaactgcc 150  
 agctcagaat aggaaaataa cttgggattt tatattggaa gacatggatc 200  
 ttgctgcca cagatcagc atttatgaca aactttcaga gactgttgat 250  
 ttggtgagac agaccggcca tcagtgtggc atgtcagaga aggcaattga 300  
 aaaatttatc agacagctgc tggaaaagaa tgaacctcag agaccccccc 350  
 cgcagtatcc tctccttata gttgtgtata aggttctcgc aaccttggga 400  
 ttaactctgc tcactgccta ctttgtgatt caacctttca gccattagc 450  
 acctgagcca gtgctttgtg gagctcac 478

<210> 32  
 <211> 3531  
 <212> DNA  
 <213> Homo sapiens

<400> 32  
 cccacgcgtc gcgccacgcg tccggctgaa cacctcttct ttggagtcag 50  
 ccactgatga ggcagggtcc ccacttgtag ctgcagcagc tgcagcagct 100  
 gcagagcgct gctcctggct ggtgccactg gtgcgcacgc tgctagaccg 150  
 tgccatagag ccgctggggc tgcagtgggg actgccctcc ctgccacca 200  
 ccaatggcag cccaccttc tttgaagact tccaggcttt ttgtgccaca 250

ccggaatggc gccacttcat cgacaaacag gtacagccaa ccatgtccca 300  
 gttcgaaatg gacacgtatg ctaagagcca cgaccttatg tcaggtttct 350  
 ggaatgcctg ctatgacatg cttatgagca gtgggcagcg gcgccagtgg 400  
 gagcgcgccc agagtcgtcg ggccttcacg gagctggtgc tggaaacctg 450  
 gcagaggcgg gcgcgcctgg aggggctacg ctacacggca gtgctgaagc 500  
 agcaggcaac gcagcactcc atggccctgc tgcactgggg gccgctgtgg 550  
 cgccagctcg ccagcccatg tggggcctgg gcgctgaggg acactcccat 600  
 cccccgtg aaactgtcca gcgcgagac atattcacgc atgctgttgc 650  
 agctggtgcc caaccatcac ttogacctc acctggaagc cagcgctctc 700  
 cgagacaatc tgggtgaggt tccctgaca cccacgagg aggcctcact 750  
 gcctctggca gtgaccaaag aggccaaagt gagcaccca ccgagttgc 800  
 tgcaggagga ccagctcgcc gaggacgagc tggctgagct ggagacccc 850  
 atggaggcag cagaactgga tgagcagcgt gagaagctgg tgtgtcggc 900  
 cgagtccag ctggtgacgg tagtggccgt ggtccaggg ctgctggagg 950  
 tcaccacaca gaatgtatac ttctacgatg gcagcactga gcgcgtgaa 1000  
 accgaggagg gcctcggcta tgatttccg gcgccactgg ccagctcgc 1050  
 tgaggtccac ctgcgcgctt tcaacctgcg ccgttcagca cttgagctct 1100  
 tctttatcga tcaggccaac tacttctca acttcccatg caaggtggcg 1150  
 acgaccccag tctcatctcc tagccagact ccgagacccc agcctggccc 1200  
 catccacccc cataccagg tacggaacca ggtgtactcg tggctcctgc 1250  
 gctacggcc cccctctcaa ggctaccta gcagccgctc ccccaggag 1300  
 atgtcgctg cctcaggcct taccagaaa tgggtacagc gtgagatct 1350  
 caacttcgag tacttgatgc aactcaacac cattcgggg cggaactaca 1400  
 atgacctgtc tcagtacctt gtgttccct ggtctctgca ggactacgtg 1450  
 tcccaacccc tggacctcag caaccagcc gtcttcggg acctgtctaa 1500  
 gcccatcggt gtggtgaacc ccaagcatgc ccagctcgtg agggagaagt 1550  
 atgaaagctt tgaggacca gcaggacca ttgacaagtt ccaactatgg 1600  
 acccactact ccaatgcagc aggcgtgatg cactacotca tccgctgga 1650  
 gcccttcacc tccctgcacg tccagctgca aagtggccgc tttgactgct 1700  
 ccgaccggca gttccactcg gtggcggcag cctggcaggc acgcctggag 1750  
 agccctgcg atgtgaagga gctcatccg gaattcttct actttcctga 1800  
 ctctcctgag aaccagaacg gttttgacct gggctgtctc cagctgacca 1850



acgagaaggt aggcgatgtg gtgctacccc cgtgggccag ctctcctgag 1900  
 gacttcatcc agcagcacccg ccaggctctg gagtcggagt atgtgtctcg 1950  
 acacctacac gaggtagatcg acctcatctt tggtacacaag cagcgggggg 2000  
 cagccgcgga ggaggccctc aatgtcttct attactgcac ctatgagggg 2050  
 gctgttagacc tggaccatgt gacagatgag cgggaacgga aggtcttgga 2100  
 gggcattatc agcaaacttg ggcagactcc ctgtcagctg ctgaaggagc 2150  
 cacatccaac tcggctctca gctgaggaag cagcccatcg ccttgccagc 2200  
 ctggacacta actcacctag catcttcag caoctggagc aaotcaaggc 2250  
 attcttcgca gaggtgactg tgagtgcagc tgggctgctg ggcaccaca 2300  
 gctggttgcc ctatgaccgc aacataagca actacttcag cttcagcaaa 2350  
 gacccacca tgggcagcca caagacgcag cgaactgctga ttggcccgatg 2400  
 ggtgccaggc agtgggtgtga gtggacaagc actggcagtg gccccggatg 2450  
 gaaagctgct attcagcggg ggccactggg atggcagcct gcgggtgact 2500  
 gcactacccc gtggcaagct gttgagccag ctgagctgcc accttgatgt 2550  
 agtaacctgc cttgcaactg acacctgtgg catctacctc atctcagct 2600  
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 gggaggtgc gggcttcaact gcccttgcca gagcagccta cagccctgac 3000  
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 gtggccatcc gcagcgtggc cgtgaccaag gagcgcagcc acgtgctggt 3150  
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 ctgaacctgg ccagtcgggc tgctcgggcc ccgcccccg caggcctggc 3350  
 cggggaggcc ccgccagaa gtcggcgga acaccccggt gtgggcagcc 3400  
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gttaccacct cagggattgg cgggcggaag tcccgccctt cgcggctga 3500  
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<210> 33  
 <211> 1003  
 <212> PRT  
 <213> Homo sapiens

<400> 33  
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 Met Ser Gly Phe Trp Asn Ala Cys Tyr Asp Met Leu Met Ser Ser  
 20 25 30  
 Gly Gln Arg Arg Gln Trp Glu Arg Ala Gln Ser Arg Arg Ala Phe  
 35 40 45  
 Gln Glu Leu Val Leu Glu Pro Ala Gln Arg Arg Ala Arg Leu Glu  
 50 55 60  
 Gly Leu Arg Tyr Thr Ala Val Leu Lys Gln Gln Ala Thr Gln His  
 65 70 75  
 Ser Met Ala Leu Leu His Trp Gly Ala Leu Trp Arg Gln Leu Ala  
 80 85 90  
 Ser Pro Cys Gly Ala Trp Ala Leu Arg Asp Thr Pro Ile Pro Arg  
 95 100 105  
 Trp Lys Leu Ser Ser Ala Glu Thr Tyr Ser Arg Met Arg Leu Lys  
 110 115 120  
 Leu Val Pro Asn His His Phe Asp Pro His Leu Glu Ala Ser Ala  
 125 130 135  
 Leu Arg Asp Asn Leu Gly Glu Val Pro Leu Thr Pro Thr Glu Glu  
 140 145 150  
 Ala Ser Leu Pro Leu Ala Val Thr Lys Glu Ala Lys Val Ser Thr  
 155 160 165  
 Pro Pro Glu Leu Leu Gln Glu Asp Gln Leu Gly Glu Asp Glu Leu  
 170 175 180  
 Ala Glu Leu Glu Thr Pro Met Glu Ala Ala Glu Leu Asp Glu Gln  
 185 190 195  
 Arg Glu Lys Leu Val Leu Ser Ala Glu Cys Gln Leu Val Thr Val  
 200 205 210  
 Val Ala Val Val Pro Gly Leu Leu Glu Val Thr Thr Gln Asn Val  
 215 220 225  
 Tyr Phe Tyr Asp Gly Ser Thr Glu Arg Val Glu Thr Glu Glu Gly  
 230 235 240  
 Ile Gly Tyr Asp Phe Arg Arg Pro Leu Ala Gln Leu Arg Glu Val  
 245 250 255  
 His Leu Arg Arg Phe Asn Leu Arg Arg Ser Ala Leu Glu Leu Phe  
 260 265 270

Phe	Ile	Asp	Gln	Ala	Asn	Tyr	Phe	Leu	Asn	Phe	Pro	Cys	Lys	Val	275	280	285
Gly	Thr	Thr	Pro	Val	Ser	Ser	Pro	Ser	Gln	Thr	Pro	Arg	Pro	Gln	290	295	300
Pro	Gly	Pro	Ile	Pro	Pro	His	Thr	Gln	Val	Arg	Asn	Gln	Val	Tyr	305	310	315
Ser	Trp	Leu	Leu	Arg	Leu	Arg	Pro	Pro	Ser	Gln	Gly	Tyr	Leu	Ser	320	325	330
Ser	Arg	Ser	Pro	Gln	Glu	Met	Leu	Arg	Ala	Ser	Gly	Leu	Thr	Gln	335	340	345
Lys	Trp	Val	Gln	Arg	Glu	Ile	Ser	Asn	Phe	Glu	Tyr	Leu	Met	Gln	350	355	360
Leu	Asn	Thr	Ile	Ala	Gly	Arg	Thr	Tyr	Asn	Asp	Leu	Ser	Gln	Tyr	365	370	375
Pro	Val	Phe	Pro	Trp	Val	Leu	Gln	Asp	Tyr	Val	Ser	Pro	Thr	Leu	380	385	390
Asp	Leu	Ser	Asn	Pro	Ala	Val	Phe	Arg	Asp	Leu	Ser	Lys	Pro	Ile	395	400	405
Gly	Val	Val	Asn	Pro	Lys	His	Ala	Gln	Leu	Val	Arg	Glu	Lys	Tyr	410	415	420
Glu	Ser	Phe	Glu	Asp	Pro	Ala	Gly	Thr	Ile	Asp	Lys	Phe	His	Tyr	425	430	435
Gly	Thr	His	Tyr	Ser	Asn	Ala	Ala	Gly	Val	Met	His	Tyr	Leu	Ile	440	445	450
Arg	Val	Glu	Pro	Phe	Thr	Ser	Leu	His	Val	Gln	Leu	Gln	Ser	Gly	455	460	465
Arg	Phe	Asp	Cys	Ser	Asp	Arg	Gln	Phe	His	Ser	Val	Ala	Ala	Ala	470	475	480
Trp	Gln	Ala	Arg	Leu	Glu	Ser	Pro	Ala	Asp	Val	Lys	Glu	Leu	Ile	485	490	495
Pro	Glu	Phe	Phe	Tyr	Phe	Pro	Asp	Phe	Leu	Glu	Asn	Gln	Asn	Gly	500	505	510
Phe	Asp	Leu	Gly	Cys	Leu	Gln	Leu	Thr	Asn	Glu	Lys	Val	Gly	Asp	515	520	525
Val	Val	Leu	Pro	Pro	Trp	Ala	Ser	Ser	Pro	Glu	Asp	Phe	Ile	Gln	530	535	540
Gln	His	Arg	Gln	Ala	Leu	Glu	Ser	Glu	Tyr	Val	Ser	Ala	His	Leu	545	550	555
His	Glu	Trp	Ile	Asp	Leu	Ile	Phe	Gly	Tyr	Lys	Gln	Arg	Gly	Pro	560	565	570
Ala	Ala	Glu	Glu	Ala	Leu	Asn	Val	Phe	Tyr	Tyr	Cys	Thr	Tyr	Glu	575	580	585

Gly	Ala	Val	Asp	Leu	Asp	His	Val	Thr	Asp	Glu	Arg	Glu	Arg	Lys	
				590					595					600	
Ala	Leu	Glu	Gly	Ile	Ile	Ser	Asn	Phe	Gly	Gln	Thr	Pro	Cys	Gln	
				605					610					615	
Leu	Leu	Lys	Glu	Pro	His	Pro	Thr	Arg	Leu	Ser	Ala	Glu	Glu	Ala	
				620					625					630	
Ala	His	Arg	Leu	Ala	Arg	Leu	Asp	Thr	Asn	Ser	Pro	Ser	Ile	Phe	
				635					640					645	
Gln	His	Leu	Asp	Glu	Leu	Lys	Ala	Phe	Phe	Ala	Glu	Val	Thr	Val	
				650					655					660	
Ser	Ala	Ser	Gly	Leu	Leu	Gly	Thr	His	Ser	Trp	Leu	Pro	Tyr	Asp	
				665					670					675	
Arg	Asn	Ile	Ser	Asn	Tyr	Phe	Ser	Phe	Ser	Lys	Asp	Pro	Thr	Met	
				680					685					690	
Gly	Ser	His	Lys	Thr	Gln	Arg	Leu	Leu	Ser	Gly	Pro	Trp	Val	Pro	
				695					700					705	
Gly	Ser	Gly	Val	Ser	Gly	Gln	Ala	Leu	Ala	Val	Ala	Pro	Asp	Gly	
				710					715					720	
Lys	Leu	Leu	Phe	Ser	Gly	Gly	His	Trp	Asp	Gly	Ser	Leu	Arg	Val	
				725					730					735	
Thr	Ala	Leu	Pro	Arg	Gly	Lys	Leu	Leu	Ser	Gln	Leu	Ser	Cys	His	
				740					745					750	
Leu	Asp	Val	Val	Thr	Cys	Leu	Ala	Leu	Asp	Thr	Cys	Gly	Ile	Tyr	
				755					760					765	
Leu	Ile	Ser	Gly	Ser	Arg	Asp	Thr	Thr	Cys	Met	Val	Trp	Arg	Leu	
				770					775					780	
Leu	His	Gln	Gly	Gly	Leu	Ser	Val	Gly	Leu	Ala	Pro	Lys	Pro	Val	
				785					790					795	
Gln	Val	Leu	Tyr	Gly	His	Gly	Ala	Ala	Val	Ser	Cys	Val	Ala	Ile	
				800					805					810	
Ser	Thr	Glu	Leu	Asp	Met	Ala	Val	Ser	Gly	Ser	Glu	Asp	Gly	Thr	
				815					820					825	
Val	Ile	Ile	His	Thr	Val	Arg	Arg	Gly	Gln	Phe	Val	Ala	Ala	Leu	
				830					835					840	
Arg	Pro	Leu	Gly	Ala	Thr	Phe	Pro	Gly	Pro	Ile	Phe	His	Leu	Ala	
				845					850					855	
Leu	Gly	Ser	Glu	Gly	Gln	Ile	Val	Val	Gln	Ser	Ser	Ala	Trp	Glu	
				860					865					870	
Arg	Pro	Gly	Ala	Gln	Val	Thr	Tyr	Ser	Leu	His	Leu	Tyr	Ser	Val	
				875					880					885	
Asn	Gly	Lys	Leu	Arg	Ala	Ser	Leu	Pro	Leu	Ala	Glu	Gln	Pro	Thr	
				890					895					900	

Ala Leu Thr Val Thr Glu Asp Phe Val Leu Leu Gly Thr Ala Gln  
905 910

Cys Ala Leu His Ile Leu Gln Leu Asn Thr Leu Leu Pro Ala Ala  
920 925 930

Pro Pro Leu Pro Met Lys Val Ala Ile Arg Ser Val Ala Val Thr  
935 940 945

Lys Glu Arg Ser His Val Leu Val Gly Leu Glu Asp Gly Lys Leu  
950 955 960

Ile Val Val Val Ala Gly Gln Pro Ser Glu Val Arg Ser Ser Gln  
965 970 975

Phe Ala Arg Lys Leu Trp Arg Ser Ser Arg Arg Ile Ser Gln Val  
980 985 990

Ser Ser Gly Glu Thr Glu Tyr Asn Pro Thr Glu Ala Arg  
995 1000

<210> 34

<211> 43

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 34

tgactgcact accccgtggc aagctgttga gccagctcag ctg 43

<210> 35

<211> 1395

<212> DNA

<213> Homo sapiens

<400> 35

cggaacgctg ggcggacgcg tgggggctgt gagaaagtgc caataaatac 50

atcatgcaac cccacggccc accttgtgaa ctctctgtgc ccagggtcta 100

tgtgcgtctt ccagggtctac tcatccaaag gctaatacca acgttctgtc 150

ttcaatctgc aaatctatgg ggtcctgggg ctcttctgga cccctaaactg 200

ggtactggcc ctggggccaat gcgtctctgc tggagccttt gctcctctct 250

actgggcctt ccacaagccc caggacatcc ctaccttccc cttaatctct 300

gccttcaccc gcacactccg ttaccacact gggtcattgg catttggagc 350

cctcatctct acccttctgc agatagcccg ggtcatcttg gagtatattg 400

accacaagct cagaggagtg cagaaccctg tagcccgctg catcatgtgc 450

tgtttcaagt gctgcctctg gtgtctggaa aaatttatca agttcctaaa 500

ccgcaatgca tacatcatga tcgccatcta cggaagaat ttctgtgtct 550

cagccaaaaa tgcgttcatg ctactcatgc gaaacattgt cagggtgtgc 600

gtcctggaca aagtcacaga cctgctgctg ttctttggga agctgctggt 650

ggtcggaggc gtgggggtcc tgtccttctt ttttttctcc ggtcgcatcc 700  
 cggggctggg taaagacttt aagagccccc acctcaacta ttactggctg 750  
 cccatcatga cctccatcct gggggcctat gtcatogcca gcggcttctt 800  
 cagcgttttc ggcattgtgt tggacacgct ctccctctgc ttctgggaag 850  
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 agccttctaa agattctggg caagaagaac gaggcgcccc cggacaacaa 950  
 gaagaggaag aagtgcacgc tccggccctg atccaggact gcaccccacc 1000  
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 ccagcctggc caacatgggt aaacctccgt ctctattaaa aatacaaaaa 1200  
 ttagccgaga gtggtggcat gcacctgtca tcccagctac tcgggagcgt 1250  
 gaggcaggag aatcgcttga acccggggagg cagaggttgc agtgagccga 1300  
 gatcgcgcca ctgcactcca acctgggtga cagactctgt ctccaaaaca 1350  
 aaacaaacaa acaaaaagat ttatttaaag atattttgtt aactc 1395

<210> 36

<211> 321

<212> PRT

<213> Homo sapiens

<400> 36

Arg	Thr	Arg	Gly	Arg	Thr	Arg	Gly	Gly	Cys	Glu	Lys	Val	Pro	Ile
1					5				10					15
Asn	Thr	Ser	Cys	Asn	Pro	Thr	Ala	His	Leu	Val	Asn	Ser	Ser	Cys
				20					25					30
Pro	Gly	Leu	Met	Cys	Val	Phe	Gln	Gly	Tyr	Ser	Ser	Lys	Gly	Leu
				35					40					45
Ile	Gln	Arg	Ser	Val	Phe	Asn	Leu	Gln	Ile	Tyr	Gly	Val	Leu	Gly
				50					55					60
Leu	Phe	Trp	Thr	Leu	Asn	Trp	Val	Leu	Ala	Leu	Gly	Gln	Cys	Val
				65					70					75
Leu	Ala	Gly	Ala	Phe	Ala	Ser	Phe	Tyr	Trp	Ala	Phe	His	Lys	Pro
				80					85					90
Gln	Asp	Ile	Pro	Thr	Phe	Pro	Leu	Ile	Ser	Ala	Phe	Ile	Arg	Thr
				95					100					105
Leu	Arg	Tyr	His	Thr	Gly	Ser	Leu	Ala	Phe	Gly	Ala	Leu	Ile	Leu
				110					115					120
Thr	Leu	Val	Gln	Ile	Ala	Arg	Val	Ile	Leu	Glu	Tyr	Ile	Asp	His
				125					130					135

Lys	Leu	Arg	Gly	Val	Gln	Asn	Pro	Val	Ala	Arg	Cys	Ile	Met	Cys	140	145	150
Cys	Phe	Lys	Cys	Cys	Leu	Trp	Cys	Leu	Glu	Lys	Phe	Ile	Lys	Phe	155	160	165
Leu	Asn	Arg	Asn	Ala	Tyr	Ile	Met	Ile	Ala	Ile	Tyr	Gly	Lys	Asn	170	175	180
Phe	Cys	Val	Ser	Ala	Lys	Asn	Ala	Phe	Met	Leu	Leu	Met	Arg	Asn	185	190	195
Ile	Val	Arg	Val	Val	Val	Leu	Asp	Lys	Val	Thr	Asp	Leu	Leu	Leu	200	205	210
Phe	Phe	Gly	Lys	Leu	Leu	Val	Val	Gly	Gly	Val	Gly	Val	Leu	Ser	215	220	225
Phe	Phe	Phe	Phe	Ser	Gly	Arg	Ile	Pro	Gly	Leu	Gly	Lys	Asp	Phe	230	235	240
Lys	Ser	Pro	His	Leu	Asn	Tyr	Tyr	Trp	Leu	Pro	Ile	Met	Thr	Ser	245	250	255
Ile	Leu	Gly	Ala	Tyr	Val	Ile	Ala	Ser	Gly	Phe	Phe	Ser	Val	Phe	260	265	270
Gly	Met	Cys	Val	Asp	Thr	Leu	Phe	Leu	Cys	Phe	Leu	Glu	Asp	Leu	275	280	285
Glu	Arg	Asn	Asn	Gly	Ser	Leu	Asp	Arg	Pro	Tyr	Tyr	Met	Ser	Lys	290	295	300
Ser	Leu	Leu	Lys	Ile	Leu	Gly	Lys	Lys	Asn	Glu	Ala	Pro	Pro	Asp	305	310	315
Asn	Lys	Lys	Arg	Lys	Lys										320		

<210> 37

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 37

tcgtgccag gggctgatgt gc 22

<210> 38

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 38

gtctttaccc agccccggga tgcg 24

<210> 39

<211> 50

<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 39  
ggcctaatacc aacgtttctgt cttcaatctg caaatctatg gggctctggg 50

<210> 40  
<211> 1365  
<212> DNA  
<213> Homo sapiens

<400> 40  
gagtcttgac cgccgcggg ctcttggtac ctcagcgoga gcgccaggcg 50  
tccggccgcc gtggctatgt tcgtgtccga ttccgcaaa gagttctacg 100  
agggtgtcca gagccagagg gtccttctct tcgtggcctc ggacgtggat 150  
gctctgtgtg cgtgcaagat ccttcaggcc ttgttcacgt gtgaccacgt 200  
gcaatatacg ctggttccag tttctgggtg gcaagaactt gaaactgcac 250  
ttcttgagca taaagaacag ttctattatt ttattctcat aaactgtgga 300  
gctaattgag acctattgga tattcttcaa cctgatgaag acatatatt 350  
ctttgtgtgt gactcccata ggccagtcaa tgcgtcaat gtatacaacg 400  
ataccagat caaattactc attaaacaag atgatgacct tgaagttccc 450  
gcctatgaag acatcttcag ggatgaagag gaggatgaag agcattcagg 500  
aaatgacagt gatgggtcag agccttctga gaagcgacac cggttagaag 550  
aggagatagt ggagcaaacc atgcggagga ggcagcgcg agagtggag 600  
gcccggagaa gagacatcct ctttgactac gagcagtatg aatatcatgg 650  
gacatcgtca gccatggtga tgtttgagct ggcttgatg ctgtccaagg 700  
acctgaatga catgctgtgg tgggcatcgt ttggactaac agaccagtgg 750  
gtgcaagaca agatcactca aatgaaatac gtgactgatg ttggtgtcct 800  
gcagcgccac gtttcccgcc acaaccacgg gaacgaggat gaggagaaca 850  
cactctccgt ggactgcaca cggatctcct ttgagtatga cctccgcctg 900  
gtgctctacc agcactggtc cctccatgac agcctgtgca acaccagcta 950  
taccgcagcc aggttcaagc tgtggtctgt gcatggacag aagcggctcc 1000  
aggagtctct tgcagacatg ggtcttcccc tgaagcaggt gaagcagaag 1050  
ttccaggcca tggacatctc cttgaaggag aatttgcggg aaatgattga 1100  
agagtctgca aataaatttg ggatgaagga catgcgcgtg cagactttca 1150  
gcattcattt tgggttcaag cacaagtttc tggccagcga cgtggtcttt 1200



gccaccatgt ctttcatgga gagcccgag aaggatggct caggacaga 1250  
 tcacttcac caggetctgg acagcctctc caggagtaac ctggacaagc 1300  
 tgtaccatgg cctggaactc gccagaagc agctgcgagc caccagcag 1350  
 accattgcc gctgc 1365

<210> 41  
 <211> 566  
 <212> PRT  
 <213> Homo sapiens

<400> 41  
 Met Phe Val Ser Asp Phe Arg Lys Glu Phe Tyr Glu Val Val Gln  
 1 5 10 15  
 Ser Gln Arg Val Leu Leu Phe Val Ala Ser Asp Val Asp Ala Leu  
 20 25 30  
 Cys Ala Cys Lys Ile Leu Gln Ala Leu Phe Gln Cys Asp His Val  
 35 40 45  
 Gln Tyr Thr Leu Val Pro Val Ser Gly Trp Gln Glu Leu Glu Thr  
 50 55 60  
 Ala Phe Leu Glu His Lys Glu Gln Phe His Tyr Phe Ile Leu Ile  
 65 70 75  
 Asn Cys Gly Ala Asn Val Asp Leu Leu Asp Ile Leu Gln Pro Asp  
 80 85 90  
 Glu Asp Thr Ile Phe Phe Val Cys Asp Ser His Arg Pro Val Asn  
 95 100 105  
 Val Val Asn Val Tyr Asn Asp Thr Gln Ile Lys Leu Leu Ile Lys  
 110 115 120  
 Gln Asp Asp Asp Leu Glu Val Pro Ala Tyr Glu Asp Ile Phe Arg  
 125 130 135  
 Asp Glu Glu Glu Asp Glu Glu His Ser Gly Asn Asp Ser Asp Gly  
 140 145 150  
 Ser Glu Pro Ser Glu Lys Arg Thr Arg Leu Glu Glu Glu Ile Val  
 155 160 165  
 Glu Gln Thr Met Arg Arg Arg Gln Arg Arg Glu Trp Glu Ala Arg  
 170 175 180  
 Arg Arg Asp Ile Leu Phe Asp Tyr Glu Gln Tyr Glu Tyr His Gly  
 185 190 195  
 Thr Ser Ser Ala Met Val Met Phe Glu Leu Ala Trp Met Leu Ser  
 200 205 210  
 Lys Asp Leu Asn Asp Met Leu Trp Trp Ala Ile Val Gly Leu Thr  
 215 220 225  
 Asp Gln Trp Val Gln Asp Lys Ile Thr Gln Met Lys Tyr Val Thr  
 230 235 240  
 Asp Val Gly Val Leu Gln Arg His Val Ser Arg His Asn His Arg

245	250	255
Asn Glu Asp Glu Glu Asn Thr Leu Ser	Val Asp Cys Thr Arg Ile	
260	265	270
Ser Phe Glu Tyr Asp Leu Arg Leu Val	Leu Tyr Gln His Trp Ser	
275	280	285
Leu His Asp Ser Leu Cys Asn Thr Ser	Tyr Thr Ala Ala Arg Phe	
290	295	300
Lys Leu Trp Ser Ser Val His Gly Gln Lys	Arg Leu Gln Glu Phe Leu	
305	310	315
Ala Asp Met Gly Leu Pro Leu Lys Gln	Val Lys Gln Lys Phe Gln	
320	325	330
Ala Met Asp Ile Ser Leu Lys Glu Asn	Leu Arg Glu Met Ile Glu	
335	340	345
Glu Ser Ala Asn Lys Phe Gly Met Lys	Asp Met Arg Val Gln Thr	
350	355	360
Phe Ser Ile His Phe Gly Phe Lys His	Lys Phe Leu Ala Ser Asp	
365	370	375
Val Val Phe Ala Thr Met Ser Leu Met	Glu Ser Pro Glu Lys Asp	
380	385	390
Gly Ser Gly Thr Asp His Phe Ile Gln	Ala Leu Asp Ser Leu Ser	
395	400	405
Arg Ser Asn Leu Asp Lys Leu Tyr His	Gly Leu Glu Leu Ala Lys	
410	415	420
Lys Gln Leu Arg Ala Thr Gln Gln Thr	Ile Ala Ser Cys Leu Cys	
425	430	435
Thr Asn Leu Val Ile Ser Gln Gly Pro	Phe Leu Tyr Cys Ser Leu	
440	445	450
Met Glu Gly Thr Pro Asp Val Met Leu	Phe Ser Arg Pro Ala Ser	
455	460	465
Leu Ser Leu Leu Ser Lys His Leu Leu	Lys Ser Phe Val Cys Ser	
470	475	480
Thr Lys Asn Arg Arg Cys Lys Leu Leu	Pro Leu Val Met Ala Ala	
485	490	495
Pro Leu Ser Met Glu His Gly Thr Val	Thr Val Val Gly Ile Pro	
500	505	510
Pro Glu Thr Asp Ser Ser Asp Arg Lys	Asn Phe Phe Gly Arg Ala	
515	520	525
Phe Glu Lys Ala Ala Glu Ser Thr Ser	Ser Arg Met Leu His Asn	
530	535	540
His Phe Asp Leu Ser Val Ile Glu Leu	Lys Ala Glu Asp Arg Ser	
545	550	555
Lys Phe Leu Asp Ala Leu Ile Ser Leu	Leu Ser	

<210> 42  
 <211> 380  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 44, 118, 172, 183  
 <223> unknown base

<400> 42  
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 ccgatttcgc caaagagttc tacgaggtgg tccagagcca gagggctcct 100  
 ctcttcgtgg cctcggangt ggatgctctg tgtgcgtgca agatccttca 150  
 ggccctgttc cagtgtgacc angtgcaata tangctgggt ccagtttctg 200  
 ggtggcaaga acttgaaact gcattttctg agcataaaga acagtttcat 250  
 tattttattc tcataaaact tggagctaata gtagacctat tggatattct 300  
 tcaacctgat gaagacacta tattctttgt gtgtgacacc cataggccag 350  
 tcaatgttgt caatgtatac aacgataccc 380

<210> 43  
 <211> 25  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 43  
 ttccgcaaaag agttctacga ggtgg 25

<210> 44  
 <211> 26  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 44  
 attgacaaca ttgactggcc tatggg 26

<210> 45  
 <211> 50  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 45  
 gtggatgctc tgtgtgcgtg caagatcctt caggccttgt tccagtgtga 50

<210> 46

<211> 3089  
 <212> DNA  
 <213> Homo sapiens

<400> 46  
 caggaaccct ctctttgggt ctggtatggg acccctttcc agtaccattt 50  
 ttctagtga accacgaagg gacgatacca gaaaacaccc tcaacccaaa 100  
 ggaaatagac tacagcccca attggctgac ttggctata gaaaaagaa 150  
 aggaacgaaa agagacagtt ttttttgaa agctaagtct tccctttatc 200  
 gagtcaagaa acccccccct cttgagctat ttacagcttt taacaattga 250  
 gtaaagtacg ctccggtcac catggtgaca gccgccctgg gtcccgctcg 300  
 ggcagcgctc ctgctcttcc tctgatgtg tgagatccgt atggtggagc 350  
 tcacctttga cagagctgtg gccagcggtc gccacgggtg ctgtgactct 400  
 gaggaccccc tggatcctgc ccatgtatcc tcagcctctt cctccggccg 450  
 cccccacgcc ctgctctgaga tcagacccta cattaatatc accatcctga 500  
 aggggtgaca aggggaccca ggcccaatgg gcctgccagg gtacatgggg 550  
 agggagggtc cccaaggga gcttggccct cagggcagca agggtgacaa 600  
 gggggagatg ggcagccccc gcgccccgtg ccagaagcgc ttcttcgcct 650  
 tctcagtggt cgcgaagacg gccctgcaca gcggcgagga cttccagacg 700  
 ctgctcttgg aaagggtctt tgtgaacctt gatgggtgct ttgacatggc 750  
 gaccggccag ttgtctgctc cctgctgtgg catctacttc ttacgctcca 800  
 atgtgcacag ctggaattac aaggagacgt acgtgcacat tatgcataac 850  
 cagaaagagg ctgtcatcct gtacgcgcag ccagcgcgag gcagcatcat 900  
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 ccagcacttc tcaaacctgg aaatgcctgc gaatcaccgc gggttcgtgt 1350  
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taaagaatgc tgtctcctct tggaaaaaaaa aaaaaaaaa 3089

<210> 47  
<211> 259  
<212> PRT  
<213> Homo sapiens

<220>  
<221> Signal Peptide  
<222> 1-20  
<223> Signal Peptide

<220>  
<221> N-glycosylation Site  
<222> 72-75  
<223> N-glycosylation Site

<220>  
<221> Clq Domain Proteins  
<222> 144-178, 78-111, 84-117  
<223> Clq Domain Proteins

<400> 47  
Met Val Thr Ala Ala Leu Gly Pro Val Trp Ala Ala Leu Leu Leu  
1 5 10 15  
Phe Leu Leu Met Cys Glu Ile Arg Met Val Glu Leu Thr Phe Asp  
20 25 30  
Arg Ala Val Ala Ser Gly Cys Gln Arg Cys Cys Asp Ser Glu Asp  
35 40 45  
Pro Leu Asp Pro Ala His Val Ser Ser Ala Ser Ser Ser Gly Arg  
50 55 60  
Pro His Ala Leu Pro Glu Ile Arg Pro Tyr Ile Asn Ile Thr Ile  
65 70 75  
Leu Lys Gly Asp Lys Gly Asp Pro Gly Pro Met Gly Leu Pro Gly  
80 85 90  
Tyr Met Gly Arg Glu Gly Pro Gln Gly Glu Pro Gly Pro Gln Gly  
95 100 105  
Ser Lys Gly Asp Lys Gly Glu Met Gly Ser Pro Gly Ala Pro Cys  
110 115 120  
Gln Lys Arg Phe Phe Ala Phe Ser Val Gly Arg Lys Thr Ala Leu  
125 130 135  
His Ser Gly Glu Asp Phe Gln Thr Leu Leu Phe Glu Arg Val Phe  
140 145 150  
Val Asn Leu Asp Gly Cys Phe Asp Met Ala Thr Gly Gln Phe Ala  
155 160 165  
Ala Pro Leu Arg Gly Ile Tyr Phe Phe Ser Leu Asn Val His Ser  
170 175 180  
Trp Asn Tyr Lys Glu Thr Tyr Val His Ile Met His Asn Gln Lys  
185 190 195  
Glu Ala Val Ile Leu Tyr Ala Gln Pro Ser Glu Arg Ser Ile Met

	200		205		210
Gln Ser Gln Ser Val Met Leu Asp Leu Ala Tyr Gly Asp Arg Val					
	215		220		225
Trp Val Arg Leu Phe Lys Arg Gln Arg Glu Asn Ala Ile Tyr Ser					
	230		235		240
Asn Asp Phe Asp Thr Tyr Ile Thr Phe Ser Gly His Leu Ile Lys					
	245		250		255
Ala Glu Asp Asp					

<210> 48  
 <211> 25  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 48  
 ccagacgctg ctcttcgaaa gggtc 25

<210> 49  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 49  
 ggtccccgta ggccaggtcc agc 23

<210> 50  
 <211> 50  
 <212> DNA  
 <213> Artificial sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 50  
 ctacttcttc agcctcaatg tgcacagctg gaattacaag gagacgtacg 50

<210> 51  
 <211> 2768  
 <212> DNA  
 <213> Homo sapiens

<400> 51  
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 ccgcctcccg ggacagaaga tgtgctccag ggtccctctg ctgctgccgc 150  
 tgctctctgc actggccctg gggcctgggg tgcagggctg cccatccggc 200  
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 ccaaccacgc ccaggtcacc caggcccgcg agggcaacct gccgtcctc 1850



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 aaaagatgaa gtgtgaaa 2768

<210> 52  
 <211> 673  
 <212> PRT  
 <213> Homo sapiens

<400> 52  
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 Ala Leu Gly Pro Gly Val Gln Gly Cys Pro Ser Gly Cys Gln Cys  
 20 25 30  
 Ser Gln Pro Gln Thr Val Phe Cys Thr Ala Arg Gln Gly Thr Thr  
 35 40 45  
 Val Pro Arg Asp Val Pro Pro Asp Thr Val Gly Leu Tyr Val Phe  
 50 55 60  
 Glu Asn Gly Ile Thr Met Leu Asp Ala Gly Ser Phe Ala Gly Leu  
 65 70 75  
 Pro Gly Leu Gln Leu Leu Asp Leu Ser Gln Asn Gln Ile Ala Ser  
 80 85 90  
 Leu Pro Ser Gly Val Phe Gln Pro Leu Ala Asn Leu Ser Asn Leu

	95		100		105
Asp Leu Thr Ala	Asn Arg Leu His Glu	Ile Thr Asn Glu Thr	Phe		
	110		115		120
Arg Gly Leu Arg Arg	Leu Glu Arg Leu Tyr	Leu Gly Lys Asn Arg			
	125		130		135
Ile Arg His Ile Gln	Pro Gly Ala Phe Asp	Thr Leu Asp Arg Leu			
	140		145		150
Leu Glu Leu Lys Leu	Gln Asp Asn Glu Leu	Arg Ala Leu Pro Pro			
	155		160		165
Leu Arg Leu Pro Arg	Leu Leu Leu Leu Asp	Leu Ser His Asn Ser			
	170		175		180
Leu Leu Ala Leu Glu	Pro Gly Ile Leu Asp	Thr Ala Asn Val Glu			
	185		190		195
Ala Leu Arg Leu Ala	Gly Leu Gly Leu Gln	Gln Leu Asp Glu Gly			
	200		205		210
Leu Phe Ser Arg Leu	Arg Asn Leu His Asp	Leu Asp Val Ser Asp			
	215		220		225
Asn Gln Leu Glu Arg	Val Pro Pro Val Ile	Arg Gly Leu Arg Gly			
	230		235		240
Leu Thr Arg Leu Arg	Leu Ala Gly Asn Thr	Arg Ile Ala Gln Leu			
	245		250		255
Arg Pro Glu Asp Leu	Ala Gly Leu Ala Ala	Leu Gln Glu Leu Asp			
	260		265		270
Val Ser Asn Leu Ser	Leu Gln Ala Leu Pro	Gly Asp Leu Ser Gly			
	275		280		285
Leu Phe Pro Arg Leu	Arg Leu Leu Ala Ala	Ala Arg Asn Pro Phe			
	290		295		300
Asn Cys Val Cys Pro	Leu Ser Trp Phe Gly	Pro Trp Val Arg Glu			
	305		310		315
Ser His Val Thr Leu	Ala Ser Pro Glu Glu	Thr Arg Cys His Phe			
	320		325		330
Pro Pro Lys Asn Ala	Gly Arg Leu Leu Leu	Glu Leu Asp Tyr Ala			
	335		340		345
Asp Phe Gly Cys Pro	Ala Thr Thr Thr Thr	Ala Thr Val Pro Thr			
	350		355		360
Thr Arg Pro Val Val	Arg Glu Pro Thr Ala	Leu Ser Ser Ser Leu			
	365		370		375
Ala Pro Thr Trp Leu	Ser Pro Thr Ala Pro	Ala Thr Glu Ala Pro			
	380		385		390
Ser Pro Pro Ser Thr	Ala Pro Pro Thr Val	Gly Pro Val Pro Gln			
	395		400		405
Pro Gln Asp Cys Pro	Pro Ser Thr Cys Leu	Asn Gly Gly Thr Cys			

410	415	420
His Leu Gly Thr Arg	His His Leu Ala Cys	Leu Cys Pro Glu Gly
425	430	435
Phe Thr Gly Leu Tyr Cys	Glu Ser Gln Met	Gly Gln Gly Thr Arg
440	445	450
Pro Ser Pro Thr Pro	Val Thr Pro Arg	Pro Pro Arg Ser Leu Thr
455	460	465
Leu Gly Ile Glu Glu	Pro Val Ser Pro Thr	Ser Leu Arg Val Gly Leu
470	475	480
Gln Arg Tyr Leu Gln	Gly Ser Ser Val	Gln Leu Arg Ser Leu Arg
485	490	495
Leu Thr Tyr Arg Asn	Leu Ser Gly Pro	Asp Lys Arg Leu Val Thr
500	505	510
Leu Arg Leu Pro Ala	Ser Leu Ala Glu	Tyr Thr Val Thr Gln Leu
515	520	525
Arg Pro Asn Ala Thr	Tyr Ser Val Cys	Val Met Pro Leu Gly
530	535	540
Gly Arg Val Pro Glu	Gly Glu Glu Ala	Cys Gly Glu Ala His Thr
545	550	555
Pro Pro Ala Val His	Ser Asn His Ala	Pro Val Thr Gln Ala Arg
560	565	570
Glu Gly Asn Leu Pro	Leu Leu Ile Ala	Pro Ala Leu Ala Ala Val
575	580	585
Leu Leu Ala Ala Leu	Ala Ala Val Gly	Ala Ala Tyr Cys Val Arg
590	595	600
Arg Gly Arg Ala Met	Ala Ala Ala Ala	Gln Asp Lys Gly Gln Val
605	610	615
Gly Pro Gly Ala Gly	Pro Leu Glu Leu	Glu Gly Val Lys Val Pro
620	625	630
Leu Glu Pro Gly Pro	Lys Ala Thr Glu	Gly Gly Gly Glu Ala Leu
635	640	645
Pro Ser Gly Ser Glu	Cys Glu Val Pro	Leu Met Gly Phe Pro Gly
650	655	660
Pro Gly Leu Gln Ser	Pro Leu His Ala	Lys Pro Tyr Ile
665	670	

<210> 53

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 53

tcttcagccg cttgcgcaac ctc 23

<210> 54  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 54  
ttgctcacat ccagctcctg cagg 24

<210> 55  
<211> 41  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 55  
tggatgttgt ccagacaacc agctggagct gtatccgagg c 41

<210> 56  
<211> 3462  
<212> DNA  
<213> Homo sapiens

<400> 56  
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ttttgagctc atcttcatca ttcatatgag gaaataagtg gtaaaatcct 100  
tggaaataca atgagactca tcagaaacat ttacatatatt ttagtagtattg 150  
ttatgacagc agagggtgat gctccagagc tgccagaaga aagggaactg 200  
atgaccaact gctccaacat gtctctaaga aaggttcccg cagaacttgac 250  
cccagccaca acgacactgg atttatccta taacctcctt tttcaactcc 300  
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 ttcaacagga taaaatctat ttgcttttga ccaaagtga catagaaaac 1100  
 ctgacaatat caaatgcaca aatgccacac atgcttttcc cgaattatcc 1150  
 tacgaaattc caatatattaa attttgcaa taatatctta acagacgagt 1200  
 tgtttaaaag aactatocaa ctgcctcact tgaaaactct cattttgaat 1250  
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 acccttgga cacttggtgc tgagtcaaaa tctattacaa cataaaaatg 1350  
 atgaaaattg ctcatggcca gaaactgttg tcaatatgaa tctgtcatac 1400  
 aataaattgt ctgattctgt cttcagggtg ttgccaaaa gtattcaaat 1450  
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 atctgatggc cttacgagaa ctaaatattg catttaattt tctaactgat 1550  
 ctccctggat gcagtcattt cagtagactt tcagttctga acattgaaat 1600  
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 taaaagacgt tcatctccac gaattatctt gcaacacagc tctgttgatt 1850  
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 <212> PRT  
 <213> Homo sapiens

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 35 40 45  
 Leu Thr Pro Ala Thr Thr Thr Leu Asp Leu Ser Tyr Asn Leu Leu  
 50 55 60  
 Phe Gln Leu Gln Ser Ser Asp Phe His Ser Val Ser Lys Leu Arg  
 65 70 75  
 Val Leu Ile Leu Cys His Asn Arg Ile Gln Gln Leu Asp Leu Lys  
 80 85 90

Thr	Phe	Glu	Phe	Asn	Lys	Glu	Leu	Arg	Tyr	Leu	Asp	Leu	Ser	Asn	95	100	105
Asn	Arg	Leu	Lys	Ser	Val	Thr	Trp	Tyr	Leu	Leu	Ala	Gly	Leu	Arg	110	115	120
Tyr	Leu	Asp	Leu	Ser	Phe	Asn	Asp	Phe	Asp	Thr	Met	Pro	Ile	Cys	125	130	135
Glu	Glu	Ala	Gly	Asn	Met	Ser	His	Leu	Glu	Ile	Leu	Gly	Leu	Ser	140	145	150
Gly	Ala	Lys	Ile	Gln	Lys	Ser	Asp	Phe	Gln	Lys	Ile	Ala	His	Leu	155	160	165
His	Leu	Asn	Thr	Val	Phe	Leu	Gly	Phe	Arg	Thr	Leu	Pro	His	Tyr	170	175	180
Glu	Glu	Gly	Ser	Leu	Pro	Ile	Leu	Asn	Thr	Thr	Lys	Leu	His	Ile	185	190	195
Val	Leu	Pro	Met	Asp	Thr	Asn	Phe	Trp	Val	Leu	Leu	Arg	Asp	Gly	200	205	210
Ile	Lys	Thr	Ser	Lys	Ile	Leu	Glu	Met	Thr	Asn	Ile	Asp	Gly	Lys	215	220	225
Ser	Gln	Phe	Val	Ser	Tyr	Glu	Met	Gln	Arg	Asn	Leu	Ser	Leu	Glu	230	235	240
Asn	Ala	Lys	Thr	Ser	Val	Leu	Leu	Leu	Asn	Lys	Val	Asp	Leu	Leu	245	250	255
Trp	Asp	Asp	Leu	Phe	Leu	Ile	Leu	Gln	Phe	Val	Trp	His	Thr	Ser	260	265	270
Val	Glu	His	Phe	Gln	Ile	Arg	Asn	Val	Thr	Phe	Gly	Gly	Lys	Ala	275	280	285
Tyr	Leu	Asp	His	Asn	Ser	Phe	Asp	Tyr	Ser	Asn	Thr	Val	Met	Arg	290	295	300
Thr	Ile	Lys	Leu	Glu	His	Val	His	Phe	Arg	Val	Phe	Tyr	Ile	Gln	305	310	315
Gln	Asp	Lys	Ile	Tyr	Leu	Leu	Leu	Thr	Lys	Met	Asp	Ile	Glu	Asn	320	325	330
Leu	Thr	Ile	Ser	Asn	Ala	Gln	Met	Pro	His	Met	Leu	Phe	Pro	Asn	335	340	345
Tyr	Pro	Thr	Lys	Phe	Gln	Tyr	Leu	Asn	Phe	Ala	Asn	Asn	Ile	Leu	350	355	360
Thr	Asp	Glu	Leu	Phe	Lys	Arg	Thr	Ile	Gln	Leu	Pro	His	Leu	Lys	365	370	375
Thr	Leu	Ile	Leu	Asn	Gly	Asn	Lys	Leu	Glu	Thr	Leu	Ser	Leu	Val	380	385	390
Ser	Cys	Phe	Ala	Asn	Asn	Thr	Pro	Leu	Glu	His	Leu	Asp	Leu	Ser	395	400	405

Gln	Asn	Leu	Leu	Gln	His	Lys	Asn	Asp	Glu	Asn	Cys	Ser	Trp	Pro	410	415	420
Glu	Thr	Val	Val	Asn	Met	Asn	Leu	Ser	Tyr	Asn	Lys	Leu	Ser	Asp	425	430	435
Ser	Val	Phe	Arg	Cys	Leu	Pro	Lys	Ser	Ile	Gln	Ile	Leu	Asp	Leu	440	445	450
Asn	Asn	Asn	Gln	Ile	Gln	Thr	Val	Pro	Lys	Glu	Thr	Ile	His	Leu	455	460	465
Met	Ala	Leu	Arg	Glu	Leu	Asn	Ile	Ala	Phe	Asn	Phe	Leu	Thr	Asp	470	475	480
Leu	Pro	Gly	Cys	Ser	His	Phe	Ser	Arg	Leu	Ser	Val	Leu	Asn	Ile	485	490	495
Glu	Met	Asn	Phe	Ile	Leu	Ser	Pro	Ser	Leu	Asp	Phe	Val	Gln	Ser	500	505	510
Cys	Gln	Glu	Val	Lys	Thr	Leu	Asn	Ala	Gly	Arg	Asn	Pro	Phe	Arg	515	520	525
Cys	Thr	Cys	Glu	Leu	Lys	Asn	Phe	Ile	Gln	Leu	Glu	Thr	Tyr	Ser	530	535	540
Glu	Val	Met	Met	Val	Gly	Trp	Ser	Asp	Ser	Tyr	Thr	Cys	Glu	Tyr	545	550	555
Pro	Leu	Asn	Leu	Arg	Gly	Thr	Arg	Leu	Lys	Asp	Val	His	Leu	His	560	565	570
Glu	Leu	Ser	Cys	Asn	Thr	Ala	Leu	Leu	Ile	Val	Thr	Ile	Val	Val	575	580	585
Ile	Met	Leu	Val	Leu	Gly	Leu	Ala	Val	Ala	Phe	Cys	Cys	Leu	His	590	595	600
Phe	Asp	Leu	Pro	Trp	Tyr	Leu	Arg	Met	Leu	Gly	Gln	Cys	Thr	Gln	605	610	615
Thr	Trp	His	Arg	Val	Arg	Lys	Thr	Thr	Gln	Glu	Gln	Leu	Lys	Arg	620	625	630
Asn	Val	Arg	Phe	His	Ala	Phe	Ile	Ser	Tyr	Ser	Glu	His	Asp	Ser	635	640	645
Leu	Trp	Val	Lys	Asn	Glu	Leu	Ile	Pro	Asn	Leu	Glu	Lys	Glu	Asp	650	655	660
Gly	Ser	Ile	Leu	Ile	Cys	Leu	Tyr	Glu	Ser	Tyr	Phe	Asp	Pro	Gly	665	670	675
Lys	Ser	Ile	Ser	Glu	Asn	Ile	Val	Ser	Phe	Ile	Glu	Lys	Ser	Tyr	680	685	690
Lys	Ser	Ile	Phe	Val	Leu	Ser	Pro	Asn	Phe	Val	Gln	Asn	Glu	Trp	695	700	705
Cys	His	Tyr	Glu	Phe	Tyr	Phe	Ala	His	His	Asn	Leu	Phe	His	Glu	710	715	720



Asn	Ser	Asp	His	Ile	Ile	Leu	Ile	Leu	Leu	Glu	Pro	Ile	Pro	Phe
				725						730				735
Tyr	Cys	Ile	Pro	Thr	Arg	Tyr	His	Lys	Leu	Lys	Ala	Leu	Leu	Glu
				740						745				750
Lys	Lys	Ala	Tyr	Leu	Glu	Trp	Pro	Lys	Asp	Arg	Arg	Lys	Cys	Gly
				755					760					765
Leu	Phe	Trp	Ala	Asn	Leu	Arg	Ala	Ala	Ile	Asn	Val	Asn	Val	Leu
				770					775					780
Ala	Thr	Arg	Glu	Met	Tyr	Glu	Leu	Gln	Thr	Phe	Thr	Glu	Leu	Asn
				785					790					795
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 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

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<210> 59  
 <211> 27  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 59  
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<210> 60  
 <211> 40  
 <212> DNA  
 <213> Artificial Sequence

<220>  
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<400> 60  
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<210> 61  
 <211> 3772  
 <212> DNA  
 <213> Homo sapiens

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 <211> 756  
 <212> PRT  
 <213> Homo sapiens

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 35 40  
 Tyr Tyr Ala Arg Pro Glu Pro Glu Leu Glu Thr Phe Ser Pro Pro 60  
 50 55  
 Leu Pro Ala Gly Pro Gly Glu Glu Trp Glu Arg Arg Pro Gln Glu 75  
 65 70  
 Pro Arg Pro Pro Lys Arg Ala Thr Lys Pro Lys Lys Ala Pro Lys 90  
 80 85  
 Arg Glu Lys Ser Ala Pro Glu Pro Pro Pro Gly Lys His Ser 105  
 95 100  
 Asn Lys Lys Val Met Arg Thr Lys Ser Ser Glu Lys Ala Ala Asn 120  
 110 115  
 Asp Asp His Ser Val Arg Val Ala Arg Glu Asp Val Arg Glu Ser 135  
 125 130  
 Cys Pro Pro Leu Gly Leu Glu Thr Leu Lys Ile Thr Asp Phe Gln 150  
 140 145  
 Leu His Ala Ser Thr Val Lys Arg Tyr Gly Leu Gly Ala His Arg 165  
 155 160  
 Gly Arg Leu Asn Ile Gln Ala Gly Ile Asn Glu Asn Asp Phe Tyr 180  
 170 175  
 Asp Gly Ala Trp Cys Ala Gly Arg Asn Asp Leu Gln Gln Trp Ile

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Glu Val Asp Ala	Arg Arg Leu Thr Arg	Phe Thr Gly Val Ile	Thr		
	200		205		210
Gln Gly Arg Asn	Ser Leu Trp Leu Ser	Asp Trp Val Thr Ser	Tyr		
	215		220		225
Lys Val Met Val	Ser Asn Asp Ser His	Thr Trp Val Thr Val	Lys		
	230		235		240
Asn Gly Ser Gly	Asp Met Ile Phe Glu	Gly Asn Ser Glu Lys	Glu		
	245		250		255
Ile Pro Val Leu	Asn Glu Leu Pro Val	Pro Met Val Ala Arg	Tyr		
	260		265		270
Ile Arg Ile Asn	Pro Gln Ser Trp Phe	Asp Asn Gly Ser Ile	Cys		
	275		280		285
Met Arg Met Glu	Ile Leu Gly Cys Pro	Leu Pro Asp Pro Asn	Asn		
	290		295		300
Tyr Tyr His Arg	Arg Asn Glu Met Thr	Thr Thr Asp Asp Leu	Asp		
	305		310		315
Phe Lys His His	Asn Tyr Lys Glu Met	Arg Gln Leu Met Lys	Val		
	320		325		330
Val Asn Glu Met	Cys Pro Asn Ile Thr	Arg Ile Tyr Asn Ile	Gly		
	335		340		345
Lys Ser His Gln	Gly Leu Lys Leu Tyr	Ala Val Glu Ile Ser	Asp		
	350		355		360
His Pro Gly Glu	His Glu Val Gly Glu	Pro Glu Phe His Tyr	Ile		
	365		370		375
Ala Gly Ala His	Gly Asn Glu Val Leu	Gly Arg Glu Leu Leu	Leu		
	380		385		390
Leu Leu Val Gln	Phe Val Cys Gln Glu	Tyr Leu Ala Arg Asn	Ala		
	395		400		405
Arg Ile Val His	Leu Val Glu Glu Thr	Arg Ile His Val Leu	Pro		
	410		415		420
Ser Leu Asn Pro	Asp Gly Tyr Glu Lys	Ala Tyr Glu Gly Gly	Ser		
	425		430		435
Glu Leu Gly Gly	Trp Ser Leu Gly Arg	Trp Thr His Asp Gly	Ile		
	440		445		450
Asp Ile Asn Asn	Asn Phe Pro Asp Leu	Asn Thr Leu Leu Trp	Glu		
	455		460		465
Ala Glu Asp Arg	Gln Asn Val Pro Arg	Lys Val Pro Asn His	Tyr		
	470		475		480
Ile Ala Ile Pro	Glu Trp Phe Leu Ser	Glu Asn Ala Thr Val	Ala		
	485		490		495
Ala Glu Thr Arg	Ala Val Ile Ala Trp	Met Glu Lys Ile Pro	Phe		

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515	520	525
Pro Tyr Asp Leu	Val Arg Ser Pro Trp	Lys Thr Gln Glu His Thr
530	535	540
Pro Thr Pro Asp	Asp His Val Phe Arg Trp	Leu Ala Tyr Ser Tyr
545	550	555
Ala Ser Thr His	Arg Leu Met Thr Asp	Ala Arg Arg Arg Val Cys
560	565	570
His Thr Glu Asp	Phe Gln Lys Glu Glu	Gly Thr Val Asn Gly Ala
575	580	585
Ser Trp His Thr	Val Ala Gly Ser Leu	Asn Asp Phe Ser Tyr Leu
590	595	600
His Thr Asn Cys	Phe Glu Leu Ser Ile	Tyr Val Gly Cys Asp Lys
605	610	615
Tyr Pro His Glu	Ser Gln Leu Pro Glu	Glu Trp Glu Asn Asn Arg
620	625	630
Glu Ser Leu Ile	Val Phe Met Glu Gln	Val His Arg Gly Ile Lys
635	640	645
Gly Leu Val Arg	Asp Ser His Gly Lys	Gly Ile Pro Asn Ala Ile
650	655	660
Ile Ser Val Glu	Gly Ile Asn His Asp	Ile Arg Thr Ala Asn Asp
665	670	675
Gly Asp Tyr Trp	Arg Leu Leu Asn Pro	Gly Glu Tyr Val Val Thr
680	685	690
Ala Lys Ala Glu	Gly Phe Thr Ala Ser	Thr Lys Asn Cys Met Val
695	700	705
Gly Tyr Asp Met	Gly Ala Thr Arg Cys	Asp Phe Thr Leu Ser Lys
710	715	720
Thr Asn Met Ala	Arg Ile Arg Glu Ile	Met Glu Lys Phe Gly Lys
725	730	735
Gln Pro Val Ser	Leu Pro Ala Arg Arg	Leu Lys Leu Arg Gly Arg
740	745	750
Lys Arg Arg Gln	Arg Gly	
755		

<210> 63

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 63

gtttctcaatg agctaccgt cccc 24

<210> 64  
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<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 64  
cgcgatgtag tggaactcgg gctc 24

<210> 65  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 65  
atccgcataa accctcagtc ctggtttgat aatgggagca tctgcatgag 50

<210> 66  
<211> 2854  
<212> DNA  
<213> Homo sapiens

<400> 66  
ctaagaggac aagatgaggc cggcctctc atttctccta gcccttctgt 50  
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cccagccccg gcttcagctc tttcccaggt gttgactcca gctccagctt 150  
cagctccagc tccaggtcgg gctccagctc cagccgcagc ttaggcagcg 200  
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 ttcaactgaa gccagcactg gtaacatggt gattagtaaa ctcaatgaca 1250  
 ccacacttca ggtgctaaac acttgggtata ccaagcagta taaacctct 1300  
 gcttctaacg ccttcatggt atgtgggggt ctgtatgcca cccgtactat 1350  
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 agcattaact ataacccttt tgaccagaaa ctttatgtct ataacgatgg 1500  
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 agaaaatctg atggcagtga caaagtgcta gcattttatt ttatctaata 2500



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 aaaataaatg attaaaaatg gctttgaaaa aaaaaaaaaa aaaaaaaaaa 2850  
 aaaa 2854

<210> 67  
 <211> 510  
 <212> PRT  
 <213> Homo sapiens

<400> 67  
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 Ser Pro Gly Phe Ser Ser Phe Pro Gly Val Asp Ser Ser Ser Ser  
 35 40 45  
 Phe Ser Ser Ser Ser Arg Ser Gly Ser Ser Ser Ser Arg Ser Leu  
 50 55 60  
 Gly Ser Gly Gly Ser Val Ser Gln Leu Phe Ser Asn Phe Thr Gly  
 65 70 75  
 Ser Val Asp Asp Arg Gly Thr Cys Gln Cys Ser Val Ser Leu Pro  
 80 85 90  
 Asp Thr Thr Phe Pro Val Asp Arg Val Glu Arg Leu Glu Phe Thr  
 95 100 105  
 Ala His Val Leu Ser Gln Lys Phe Glu Lys Glu Leu Ser Lys Val  
 110 115 120  
 Arg Glu Tyr Val Gln Leu Ile Ser Val Tyr Glu Lys Lys Leu Leu  
 125 130 135  
 Asn Leu Thr Val Arg Ile Asp Ile Met Glu Lys Asp Thr Ile Ser  
 140 145 150  
 Tyr Thr Glu Leu Asp Phe Glu Leu Ile Lys Val Glu Val Lys Glu  
 155 160 165  
 Met Glu Lys Leu Val Ile Gln Leu Lys Glu Ser Phe Gly Gly Ser  
 170 175 180  
 Ser Glu Ile Val Asp Gln Leu Glu Val Glu Ile Arg Asn Met Thr  
 185 190 195  
 Leu Leu Val Glu Lys Leu Glu Thr Leu Asp Lys Asn Asn Val Leu  
 200 205 210

Ala	Ile	Arg	Arg	Glu	Ile	Val	Ala	Leu	Lys	Thr	Lys	Leu	Lys	Glu
				215					220					225
Cys	Glu	Ala	Ser	Lys	Asp	Gln	Asn	Thr	Pro	Val	Val	His	Pro	Pro
				230					235					240
Pro	Thr	Pro	Gly	Ser	Cys	Gly	His	Gly	Gly	Val	Val	Asn	Ile	Ser
				245					250					255
Lys	Pro	Ser	Val	Val	Gln	Leu	Asn	Trp	Arg	Gly	Phe	Ser	Tyr	Leu
				260					265					270
Tyr	Gly	Ala	Trp	Gly	Arg	Asp	Tyr	Ser	Pro	Gln	His	Pro	Asn	Lys
				275					280					285
Gly	Leu	Tyr	Trp	Val	Ala	Pro	Leu	Asn	Thr	Asp	Gly	Arg	Leu	Leu
				290					295					300
Glu	Tyr	Tyr	Arg	Leu	Tyr	Asn	Thr	Leu	Asp	Asp	Leu	Leu	Leu	Tyr
				305					310					315
Ile	Asn	Ala	Arg	Glu	Leu	Arg	Ile	Thr	Tyr	Gly	Gln	Gly	Ser	Gly
				320					325					330
Thr	Ala	Val	Tyr	Asn	Asn	Asn	Met	Tyr	Val	Asn	Met	Tyr	Asn	Thr
				335					340					345
Gly	Asn	Ile	Ala	Arg	Val	Asn	Leu	Thr	Thr	Asn	Thr	Ile	Ala	Val
				350					355					360
Thr	Gln	Thr	Leu	Pro	Asn	Ala	Ala	Tyr	Asn	Asn	Arg	Phe	Ser	Tyr
				365					370					375
Ala	Asn	Val	Ala	Trp	Gln	Asp	Ile	Asp	Phe	Ala	Val	Asp	Glu	Asn
				380					385					390
Gly	Leu	Trp	Val	Ile	Tyr	Ser	Thr	Glu	Ala	Ser	Thr	Gly	Asn	Met
				395					400					405
Val	Ile	Ser	Lys	Leu	Asn	Asp	Thr	Thr	Leu	Gln	Val	Leu	Asn	Thr
				410					415					420
Trp	Tyr	Thr	Lys	Gln	Tyr	Lys	Pro	Ser	Ala	Ser	Asn	Ala	Phe	Met
				425					430					435
Val	Cys	Gly	Val	Leu	Tyr	Ala	Thr	Arg	Thr	Met	Asn	Thr	Arg	Thr
				440					445					450
Glu	Glu	Ile	Phe	Tyr	Tyr	Tyr	Asp	Thr	Asn	Thr	Gly	Lys	Glu	Gly
				455					460					465
Lys	Leu	Asp	Ile	Val	Met	His	Lys	Met	Gln	Glu	Lys	Val	Gln	Ser
				470					475					480
Ile	Asn	Tyr	Asn	Pro	Phe	Asp	Gln	Lys	Leu	Tyr	Val	Tyr	Asn	Asp
				485					490					495
Gly	Tyr	Leu	Leu	Asn	Tyr	Asp	Leu	Ser	Val	Leu	Gln	Lys	Pro	Gln
				500					505					510

<210> 68  
 <211> 410  
 <212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 206, 217, 387

<223> unknown base

<400> 68

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ggtgaacatc agcaaacctg ctgtgggtca gctcaactgg agaggggttt 150  
cttatctata tgggtgcttg ggtagggatt actctcccca gcacccaaac 200  
aaaggnatgt attgggnggc gccattgaat acagatggga gactgttgga 250  
gtattataga ctgtacaacc cactggatga tttgctattg tatataaatg 300  
ctcgagagtt gcggatcacc tatggccaag gtagtggtac agcagtttac 350  
aacaacaaca tgtactgcaa catgtacaac accgggnata ttgccagagt 400  
taacctgacc 410

<210> 69

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 69

agctgtggtc atggtgggtg ggtg 24

<210> 70

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 70

ctacctggc cataggtgat ccgc 24

<210> 71

<211> 42

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 71

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<210> 72

<211> 3127

<212> DNA

<213> Homo sapiens

<400> 72

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tggggctgtg ctccatggcg agctggatac catgtttgtg tggaagtgcc 150  
cctgtttgc tatgocgatg ctgtcctagt ggaacaact ccactgtaac 200  
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taatgttgat accaggaatg gaagaacaac tgaataagat tccctggattt 300  
tgtgagaatg agaaagggtg tgtccctgtt aacattttg tggctataa 350  
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cacaatgat tttggttctt taaatttgct gcagcaattg caattattat 500  
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cctctgcgtt ggtgcttctg taatgtctat actgccaaa atccaagaat 850  
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<210> 73  
 <211> 453  
 <212> PRT  
 <213> Homo sapiens

<400> 73

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				20					25					30
Ser	Gly	Asn	Asn	Ser	Thr	Val	Thr	Arg	Leu	Ile	Tyr	Ala	Leu	Phe
				35					40					45
Leu	Leu	Val	Gly	Val	Cys	Val	Ala	Cys	Val	Met	Leu	Ile	Pro	Gly
				50					55					60
Met	Glu	Glu	Gln	Leu	Asn	Lys	Ile	Pro	Gly	Phe	Cys	Glu	Asn	Glu
				65					70					75
Lys	Gly	Val	Val	Pro	Cys	Asn	Ile	Leu	Val	Gly	Tyr	Lys	Ala	Val
				80					85					90
Tyr	Arg	Leu	Cys	Phe	Gly	Leu	Ala	Met	Phe	Tyr	Leu	Leu	Leu	Ser
				95					100					105
Leu	Leu	Met	Ile	Lys	Val	Lys	Ser	Ser	Ser	Asp	Pro	Arg	Ala	Ala
				110					115					120
Val	His	Asn	Gly	Phe	Trp	Phe	Phe	Lys	Phe	Ala	Ala	Ala	Ile	Ala
				125					130					135
Ile	Ile	Ile	Gly	Ala	Phe	Phe	Ile	Pro	Glu	Gly	Thr	Phe	Thr	Thr
				140					145					150
Val	Trp	Phe	Tyr	Val	Gly	Met	Ala	Gly	Ala	Phe	Cys	Phe	Ile	Leu
				155					160					165
Ile	Gln	Leu	Val	Leu	Leu	Ile	Asp	Phe	Ala	His	Ser	Trp	Asn	Glu
				170					175					180
Ser	Trp	Val	Glu	Lys	Met	Glu	Glu	Gly	Asn	Ser	Arg	Cys	Trp	Tyr
				185					190					195
Ala	Ala	Leu	Leu	Ser	Ala	Thr	Ala	Leu	Asn	Tyr	Leu	Leu	Ser	Leu
				200					205					210
Val	Ala	Ile	Val	Leu	Phe	Phe	Val	Tyr	Tyr	Thr	His	Pro	Ala	Ser
				215					220					225
Cys	Ser	Glu	Asn	Lys	Ala	Phe	Ile	Ser	Val	Asn	Met	Leu	Leu	Cys
				230					235					240
Val	Gly	Ala	Ser	Val	Met	Ser	Ile	Leu	Pro	Lys	Ile	Gln	Glu	Ser
				245					250					255
Gln	Pro	Arg	Ser	Gly	Leu	Leu	Gln	Ser	Ser	Val	Ile	Thr	Val	Tyr
				260					265					270
Thr	Met	Tyr	Leu	Thr	Trp	Ser	Ala	Met	Thr	Asn	Glu	Pro	Glu	Thr
				275					280					285

Asn	Cys	Asn	Pro	Ser	Leu	Leu	Ser	Ile	Ile	Gly	Tyr	Asn	Thr	Thr	290	295	300
Ser	Thr	Val	Pro	Lys	Glu	Gly	Gln	Ser	Val	Gln	Trp	Trp	His	Ala	305	310	315
Gln	Gly	Ile	Ile	Gly	Leu	Ile	Leu	Phe	Leu	Leu	Cys	Val	Phe	Tyr	320	325	330
Ser	Ser	Ile	Arg	Thr	Ser	Asn	Asn	Ser	Gln	Val	Asn	Lys	Leu	Thr	335	340	345
Leu	Thr	Ser	Asp	Glu	Ser	Thr	Leu	Ile	Glu	Asp	Gly	Gly	Ala	Arg	350	355	360
Ser	Asp	Gly	Ser	Leu	Glu	Asp	Gly	Asp	Val	His	Arg	Ala	Val		365	370	375
Asp	Asn	Glu	Arg	Asp	Gly	Val	Thr	Tyr	Ser	Tyr	Ser	Phe	Phe	His	380	385	390
Phe	Met	Leu	Phe	Leu	Ala	Ser	Leu	Tyr	Ile	Met	Met	Thr	Leu	Thr	395	400	405
Asn	Trp	Ser	Arg	Tyr	Glu	Pro	Ser	Arg	Glu	Met	Lys	Ser	Gln	Trp	410	415	420
Thr	Ala	Val	Trp	Val	Lys	Ile	Ser	Ser	Ser	Trp	Ile	Gly	Ile	Val	425	430	435
Leu	Tyr	Val	Trp	Thr	Leu	Val	Ala	Pro	Leu	Val	Leu	Thr	Asn	Arg	440	445	450
Asp Phe Asp																	

<210> 74  
 <211> 480  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 48, 163  
 <223> unknown base

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 ataccatggt tgtgtggaag tgccccgtgt ttgctatgcc gatgctgtcc 150  
 tagtggaaac aantccactg taactagatt gatctatgca cttttcttgc 200  
 ttgttgagat atgtgtagct tgtgtaatat tgataccagg aatggaagaa 250  
 caactgaata agattcctgg attttgtgag aatgagaaaag gtgtgtgtccc 300  
 ttgtaacatt ttggttggtc ataaagctgt atatcgtttg tgcttttggt 350  
 tggctatggt ctatcttctt ctctctttac taatgatcaa agtgaagagt 400

agcagtgatc ctagagctgc agtgcacaat ggattttggt tctttaaat 450  
tgctgcagca attgcaatta ttattggggc 480

<210> 75  
<211> 438  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 32, 65, 92, 121, 142, 154, 170, 293, 315, 323  
<223> unknown base

<400> 75  
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tgctgtccta gtggaacaa ntccactgta attagattga tntatgcact 150  
ttntttgctt gttggagtan gtgtagcttg tgtaatgttg ataccaggaa 200  
tggaagaaca actgaataag attcctggat tttgtgagaa tgagaaaggt 250  
gttggtccctt gtaacatttt gggtggctat aaagctgtat atngtttttg 300  
ctttggtttg gctangttct atnttcttct ctctttacta atgatcaaag 350  
tgaagagtag cagtgatcct agagctgcag tgcaacaatgg attttggttt 400  
tttaaatttg ctgcagcaat tgoaattatt attggggc 438

<210> 76  
<211> 473  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 48  
<223> unknown base

<400> 76  
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gttttgtgtg aagtgccttg tgtttgctat gccgatgctg tccatgtgga 150  
aacaactcca ctgtaactag attgatctat gcacttttct tgcttgttgg 200  
agtatgtgta gcttgtgtaa tgttgatacc aggaatggaa gaacaactga 250  
ataagattcc tggattttgt gagaatgaga aaggtgttgt cccttgaac 300  
attttggttg gctataaagc tgtatatcgt ttgtgctttg gtttggctat 350  
gttctatctt cttctctctt tactaatgat caaagtgaag agtagcagtg 400  
atcctagagc tgcagtgcac aatggatttt ggttctttaa atttgcgtga 450  
gcaattgcaa ttattattgg ggc 473



<210> 77  
<211> 666  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 21, 111  
<223> unknown base

<400> 77  
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caggattgga ngaacaactg aataagattc ctggattttt gtgagaatga 150  
gaaagggtgtt gtccccttgt aacatttttg gttggctata aagctgtata 200  
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<400> 79  
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 <213> Homo sapiens

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 35 40 45  
 Ile Ile Leu Val Leu Thr Asp Asp Gln Asp Val Glu Leu Gly Ser  
 50 55 60  
 Met Gln Val Met Asn Lys Thr Arg Arg Ile Met Glu Gln Gly Gly  
 65 70 75  
 Ala His Phe Ile Asn Ala Phe Val Thr Thr Pro Met Cys Cys Pro  
 80 85 90  
 Ser Arg Ser Ser Ile Leu Thr Gly Lys Tyr Val His Asn His Asn  
 95 100 105  
 Thr Tyr Thr Asn Asn Glu Asn Cys Ser Ser Pro Ser Trp Gln Ala  
 110 115 120  
 Gln His Glu Ser Arg Thr Phe Ala Val Tyr Leu Asn Ser Thr Gly  
 125 130 135  
 Tyr Arg Thr Ala Phe Phe Gly Lys Tyr Leu Asn Glu Tyr Asn Gly  
 140 145 150  
 Ser Tyr Val Pro Pro Gly Trp Lys Glu Trp Val Gly Leu Leu Lys  
 155 160 165  
 Asn Ser Arg Phe Tyr Asn Tyr Thr Leu Cys Arg Asn Gly Val Lys  
 170 175 180  
 Glu Lys His Gly Ser Asp Tyr Ser Lys Asp Tyr Leu Thr Asp Leu  
 185 190 195  
 Ile Thr Asn Asp Ser Val Ser Phe Phe Arg Thr Ser Lys Lys Met  
 200 205 210  
 Tyr Pro His Arg Pro Val Leu Met Val Ile Ser His Ala Ala Pro  
 215 220 225  
 His Gly Pro Glu Asp Ser Ala Pro Gln Tyr Ser Arg Leu Phe Pro  
 230 235 240  
 Asn Ala Ser Gln His Ile Thr Pro Ser Tyr Asn Tyr Ala Pro Asn  
 245 250 255

Pro Asp Lys His	Trp	Ile Met Arg Tyr	Thr Gly Pro Met Lys	Pro
	260		265	270
Ile His Met Glu	Phe Thr Asn Met Leu	Gln Arg Lys Arg Leu	Gln	
	275		280	285
Thr Leu Met Ser	Val Asp Asp Ser Met	Glu Thr Ile Tyr Asn	Met	
	290		295	300
Leu Val Glu Thr	Gly Glu Leu Asp Asn	Thr Tyr Ile Val Tyr	Thr	
	305		310	315
Ala Asp His Gly	Tyr His Ile Gly Gln	Phe Gly Leu Val Lys	Gly	
	320		325	330
Lys Ser Met Pro	Tyr Glu Phe Asp Ile	Arg Val Pro Phe Tyr	Val	
	335		340	345
Arg Gly Pro Asn	Val Glu Ala Gly Cys	Leu Asn Pro His Ile	Val	
	350		355	360
Leu Asn Ile Asp	Leu Ala Pro Thr Ile	Leu Asp Ile Ala Gly	Leu	
	365		370	375
Asp Ile Pro Ala	Asp Met Asp Gly Lys	Ser Ile Leu Lys Leu	Leu	
	380		385	390
Asp Thr Glu Arg	Pro Val Asn Arg Phe	His Leu Lys Lys Lys	Met	
	395		400	405
Arg Val Trp Arg	Asp Ser Phe Leu Val	Glu Arg Gly Lys Leu	Leu	
	410		415	420
His Lys Arg Asp	Asn Asp Lys Val Asp	Ala Gln Glu Glu Asn	Phe	
	425		430	435
Leu Pro Lys Tyr	Gln Arg Val Lys Asp	Leu Cys Gln Arg Ala	Glu	
	440		445	450
Tyr Gln Thr Ala	Cys Glu Gln Leu Gly	Gln Lys Trp Gln Cys	Val	
	455		460	465
Glu Asp Ala Thr	Gly Lys Leu Lys Leu	His Lys Cys Lys Gly	Pro	
	470		475	480
Met Arg Leu Gly	Gly Ser Arg Ala Leu	Ser Asn Leu Val Pro	Lys	
	485		490	495
Tyr Tyr Gly Gln	Gly Ser Glu Ala Cys	Thr Cys Asp Ser Gly	Asp	
	500		505	510
Tyr Lys Leu Ser	Leu Ala Gly Arg Arg	Lys Lys Leu Phe Lys	Lys	
	515		520	525
Lys Tyr Lys Ala	Ser Tyr Val Arg Ser	Arg Ser Ile Arg Ser	Val	
	530		535	540
Ala Ile Glu Val	Asp Gly Arg Val Tyr	His Val Gly Leu Gly	Asp	
	545		550	555
Ala Ala Gln Pro	Arg Asn Leu Thr Lys	Arg His Trp Pro Gly	Ala	
	560		565	570

Pro	Glu	Asp	Gln	Asp	Asp	Lys	Asp	Gly	Gly	Asp	Phe	Ser	Gly	Thr		575	580	585
Gly	Gly	Leu	Pro	Asp	Tyr	Ser	Ala	Ala	Asn	Pro	Ile	Lys	Val	Thr		590	595	600
His	Arg	Cys	Tyr	Ile	Leu	Glu	Asn	Asp	Thr	Val	Gln	Cys	Asp	Leu		605	610	615
Asp	Leu	Tyr	Lys	Ser	Leu	Gln	Ala	Trp	Lys	Asp	His	Lys	Leu	His		620	625	630
Ile	Asp	His	Glu	Ile	Glu	Thr	Leu	Gln	Asn	Lys	Ile	Lys	Asn	Leu		635	640	645
Arg	Glu	Val	Arg	Gly	His	Leu	Lys	Lys	Lys	Arg	Pro	Glu	Glu	Cys		650	655	660
Asp	Cys	His	Lys	Ile	Ser	Tyr	His	Thr	Gln	His	Lys	Gly	Arg	Leu		665	670	675
Lys	His	Arg	Gly	Ser	Ser	Leu	His	Pro	Phe	Arg	Lys	Gly	Leu	Gln		680	685	690
Glu	Lys	Asp	Lys	Val	Trp	Leu	Leu	Arg	Glu	Gln	Lys	Arg	Lys	Lys		695	700	705
Lys	Leu	Arg	Lys	Leu	Leu	Lys	Arg	Leu	Gln	Asn	Asn	Asp	Thr	Cys		710	715	720
Ser	Met	Pro	Gly	Leu	Thr	Cys	Phe	Thr	His	Asp	Asn	Gln	His	Trp		725	730	735
Gln	Thr	Ala	Pro	Phe	Trp	Thr	Leu	Gly	Pro	Phe	Cys	Ala	Cys	Thr		740	745	750
Ser	Ala	Asn	Asn	Asn	Thr	Tyr	Trp	Cys	Met	Arg	Thr	Ile	Asn	Glu		755	760	765
Thr	His	Asn	Phe	Leu	Phe	Cys	Glu	Phe	Ala	Thr	Gly	Phe	Leu	Glu		770	775	780
Tyr	Phe	Asp	Leu	Asn	Thr	Asp	Pro	Tyr	Gln	Leu	Met	Asn	Ala	Val		785	790	795
Asn	Thr	Leu	Asp	Arg	Asp	Val	Leu	Asn	Gln	Leu	His	Val	Gln	Leu		800	805	810
Met	Glu	Leu	Arg	Ser	Cys	Lys	Gly	Tyr	Lys	Gln	Cys	Asn	Pro	Arg		815	820	825
Thr	Arg	Asn	Met	Asp	Leu	Asp	Gly	Gly	Ser	Tyr	Glu	Gln	Tyr	Arg		830	835	840
Gln	Phe	Gln	Arg	Arg	Lys	Trp	Pro	Glu	Met	Lys	Arg	Pro	Ser	Ser		845	850	855
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 <210> 86  
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 <210> 87  
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<210> 92  
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<210> 93  
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<210> 94  
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<212> DNA  
<213> Homo sapiens

<400> 94  
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<210> 95

<211> 115

<212> PRT

<213> Homo sapiens

<400> 95

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				20					25				30	
Cys	Leu	Phe	His	Gly	Arg	Gln	Asp	Cys	Asp	Val	Glu	Arg	Asn	Arg
				35					40				45	
Thr	Ala	Ala	Gly	Gly	Asn	Arg	Val	Arg	Arg	Ala	Gln	Pro	Trp	Pro
				50					55				60	
Phe	Arg	Arg	Arg	Gly	His	Leu	Gly	Ile	Phe	His	His	His	Arg	His
				65					70				75	
Pro	Gly	His	Val	Ser	His	Val	Pro	Asn	Val	Gly	Leu	His	His	His
				80					85				90	
His	His	Pro	Arg	His	Thr	Pro	His	His	Leu	His	His	His	His	His
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<212> DNA

<213> Homo sapiens

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<210> 97

<211> 313

<212> PRT

<213> Homo sapiens

<400> 97

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Leu	Leu	Leu	Leu	Thr	Leu	Leu	Ala	Phe	Ala	Gly	Tyr	Ser	Gly	Leu
				20					25					30
Leu	Ala	Gly	Val	Glu	Val	Ser	Ala	Gly	Ser	Pro	Pro	Ile	Arg	Asn
				35					40					45
Val	Thr	Val	Ala	Tyr	Lys	Phe	His	Met	Gly	Leu	Tyr	Gly	Glu	Thr
				50					55					60
Gly	Arg	Leu	Phe	Thr	Glu	Ser	Cys	Ser	Ile	Ser	Pro	Lys	Leu	Arg
				65					70					75

Ser	Ile	Ala	Val	Tyr	Tyr	Asp	Asn	Pro	His	Met	Val	Pro	Pro	Asp	
				80					85					90	
Lys	Cys	Arg	Cys	Ala	Val	Gly	Ser	Ile	Leu	Ser	Glu	Gly	Glu	Glu	
				95					100					105	
Ser	Pro	Ser	Pro	Glu	Leu	Ile	Asp	Leu	Tyr	Gln	Lys	Phe	Gly	Phe	
				110					115					120	
Lys	Val	Phe	Ser	Phe	Pro	Ala	Pro	Ser	His	Val	Val	Thr	Ala	Thr	
				125					130					135	
Phe	Pro	Tyr	Thr	Thr	Ile	Leu	Ser	Ile	Trp	Leu	Ala	Thr	Arg	Arg	
				140					145					150	
Val	His	Pro	Ala	Leu	Asp	Thr	Tyr	Ile	Lys	Glu	Arg	Lys	Leu	Cys	
				155					160					165	
Ala	Tyr	Pro	Arg	Leu	Glu	Ile	Tyr	Gln	Glu	Asp	Gln	Ile	His	Phe	
				170					175					180	
Met	Cys	Pro	Leu	Ala	Arg	Gln	Gly	Asp	Phe	Tyr	Val	Pro	Glu	Met	
				185					190					195	
Lys	Glu	Thr	Glu	Trp	Lys	Trp	Arg	Gly	Leu	Val	Glu	Ala	Ile	Asp	
				200					205					210	
Thr	Gln	Val	Asp	Gly	Thr	Gly	Ala	Asp	Thr	Met	Ser	Asp	Thr	Ser	
				215					220					225	
Ser	Val	Ser	Leu	Glu	Val	Ser	Pro	Gly	Ser	Arg	Glu	Thr	Ser	Ala	
				230					235					240	
Ala	Thr	Leu	Ser	Pro	Gly	Ala	Ser	Ser	Arg	Gly	Trp	Asp	Asp	Gly	
				245					250					255	
Asp	Thr	Arg	Ser	Glu	His	Ser	Tyr	Ser	Glu	Ser	Gly	Ala	Ser	Gly	
				260					265					270	
Ser	Ser	Phe	Glu	Glu	Leu	Asp	Leu	Glu	Gly	Glu	Gly	Pro	Leu	Gly	
				275					280					285	
Glu	Ser	Arg	Leu	Asp	Pro	Gly	Thr	Glu	Pro	Leu	Gly	Thr	Thr	Lys	
				290					295					300	
Trp	Leu	Trp	Glu	Pro	Thr	Ala	Pro	Glu	Lys	Gly	Lys	Glu			
				305					310						

<210> 98

<211> 725

<212> DNA

<213> Homo sapiens

<400> 98

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ctgaggtgtg gctcgaacc gaaagtccg tccggaccct ccaagtggag 200

accctggttg agccccaga accatgtgcc gagcccgctg cttttggaga 250

cacgcttcac atacactaca cggaagctt ggtagatgga cgtattattg 300  
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 gtgatccag gtcctggagca gagtcttctc gacatgtgtg tgggagagaa 400  
 gcgaagggca atcattcctt ctcaattggc ctatggaaaa cggggatttc 450  
 caccatctgt cccagcggat gcagtgggtg agtatgacgt ggagctgatt 500  
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 tctggtaggg atggccatg tgccagccct cctgggcctc attgggtatc 600  
 acctatacag aaaggccaat agaccctaaag tctccaaaaa gaagctcaag 650  
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<210> 99

<211> 201

<212> PRT

<213> Homo sapiens

<400> 99

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Leu	Leu	Leu	Ser	Ala	Ala	Val	Cys	Arg	Ala	Glu	Ala	Gly	Leu	Glu
				20					25				30	
Thr	Glu	Ser	Pro	Val	Arg	Thr	Leu	Gln	Val	Glu	Thr	Leu	Val	Glu
				35					40				45	
Pro	Pro	Glu	Pro	Cys	Ala	Glu	Pro	Ala	Ala	Phe	Gly	Asp	Thr	Leu
				50					55				60	
His	Ile	His	Tyr	Thr	Gly	Ser	Leu	Val	Asp	Gly	Arg	Ile	Ile	Asp
				65					70				75	
Thr	Ser	Leu	Thr	Arg	Asp	Pro	Leu	Val	Ile	Glu	Leu	Gly	Gln	Lys
				80					85				90	
Gln	Val	Ile	Pro	Gly	Leu	Glu	Gln	Ser	Leu	Leu	Asp	Met	Cys	Val
				95					100				105	
Gly	Glu	Lys	Arg	Arg	Ala	Ile	Ile	Pro	Ser	His	Leu	Ala	Tyr	Gly
				110					115				120	
Lys	Arg	Gly	Phe	Pro	Pro	Ser	Val	Pro	Ala	Asp	Ala	Val	Val	Gln
				125					130				135	
Tyr	Asp	Val	Glu	Leu	Ile	Ala	Leu	Ile	Arg	Ala	Asn	Tyr	Trp	Leu
				140					145				150	
Lys	Leu	Val	Lys	Gly	Ile	Leu	Pro	Leu	Val	Gly	Met	Ala	Met	Val
				155					160				165	
Pro	Ala	Leu	Leu	Gly	Leu	Ile	Gly	Tyr	His	Leu	Tyr	Arg	Lys	Ala
				170					175				180	
Asn	Arg	Pro	Lys	Val	Ser	Lys	Lys	Lys	Leu	Lys	Glu	Glu	Lys	Arg

Asn Lys Ser Lys Lys Lys  
200

<210> 100  
<211> 705  
<212> DNA  
<213> Homo sapiens

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cgctccatct gctgctgctg ctgctgctca gtgcggcggg gtgcgggct 150  
gaggctgggc tcgaaacoga aagtcocgtc cggaccctcc aagtggagac 200  
cctggtggag cccccagaac catgtgcoga gcccgctgct tttggagaca 250  
cgcttcacat aactacacg ggaagcttgg tagatggacg tattattgac 300  
acctccctga ccagagaccc tctggttata gaacttgccc aaaagcagg 350  
gattccagg 400  
gaaggcaat cattcctct cacttgccct atggaaaacg gggatttcca 450  
ccatctgtcc cagcggatgc agtggtgcag tatgacgtgg agctgattgc 500  
actaatccga gccaaactact ggctaaagct ggtgaaggcg attttgcctc 550  
tggtagggat ggccatggtg ccaccctcct gggcctcatt gcgatcacc 600  
tatacagaaa ggccaataga cccaaagtct ccaaaaagaa gctcaaggaa 650  
gagaaacgaa acaagagcaa aaagaataa taaataataa attttaaaaa 700  
actta 705

<210> 101  
<211> 543  
<212> DNA  
<213> Homo sapiens

<400> 101  
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gaaccatgtg ccgagcccg cgtcttttga gacacgcttc acatacacta 100  
cacgggaagc ttggtagatg gacgtattat tgacacctcc ctgaccagag 150  
accctctggt tatagaactt ggccaaaagc aggtgatccc aggtctggag 200  
cagagtcttc tcgacatgtg tgtgggagag aagcgaaggg caatcatccc 250  
ttctcacttg gcctatggaa aacggggatt tccacctatc gtcccagcgg 300  
atgcagtggt gcagtatgac gtggagctga ttgcactaat ccgagccaac 350  
tactggctaa agctggtgaa gggcattttg cctctggtag ggatggccat 400

gggtccagcc ctctctggcc tcattgggta tcacctatac agaaaggcca 450  
 atagacccaa agtctccaaa aagaagctca aggaagagaa acgaaacaag 500  
 agcaaaaaga aataataaat aataaat tttt aaaaaactta aaa 543

<210> 102  
 <211> 1316  
 <212> DNA  
 <213> Homo sapiens

<400> 102  
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 aaatcggggg agtgaggcgg gccggcgagg cgcgacacgg ggctccggaa 100  
 ccaactgcacg acgggggtgg actgacctga aaaaaatgtc tggatttcta 150  
 gagggtctga gatgctcaga atgcattgac tggggggaaa agcgaatac 200  
 tattgtcttc attgtgctg gtgtactatt ttttacaggc tgggtgatta 250  
 tcatagatgc agctgttatt tatccacca tgaagattt caaccactca 300  
 taccatgcct gtggtgttat agcaaccata gccttcctaa tgattaatgc 350  
 agtatcgaat ggacaagtcc gaggtgatag ttacagtga ggttgtctgg 400  
 gtcaaacagg tgctgcgatt tggcttttcg ttggtttcat gttggccttt 450  
 ggatctctga ttgcatctat gtggattcct tttggaggtt atgttgctaa 500  
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 tcatcttttt tggagggtcg gtttttaagt ttggccgcac tgaagactta 600  
 tggcagtga cactctgat ttcccacagc acaacagccc tgcattgggt 650  
 tgtttgtttt ttactgtct actcccaacc ttttgaatg ccattttcta 700  
 aacttatttc tgagtgtagt ctgagcttaa agttgtgtaa tactaaaaac 750  
 acgagaacac ctaaacacaa accaaaaatc tattgtggta tgcacttgat 800  
 taacttataa aatgttagag gaaacttca catgaataat ttttgtcaaa 850  
 ttttatcatg gtataattg taaaaataa aagaattac aaagaaatt 900  
 atggatttgt caatgtaagt atttgtcata tctgaggctc aaaccacaa 950  
 tgaagtgtct ctgaagattt aatgtgttta ttcaaatgtg gtcctctctg 1000  
 tgtcaaatgt taaatgaaat ataaacattt tttagttttt aaaatatccc 1050  
 gtggtcaaaa ttcttctcca ctataattgg tatttacttt taccaaaaat 1100  
 tctgtgaaca tgtaatgtaa ctggcctttt aggggtctccc aaggggtgag 1150  
 tggacgtggt ggaagagaga agcaccatgg tccagccacc aggtccctcg 1200  
 tgtcccttcc atgggaaggt ctccgctgt gcctctcatt ccaagggcag 1250  
 gaagatgtga ctacgccatg acacgtgggt ctggtgggat gcacagtcac 1300

tccacatcca ccaactg 1316

<210> 103  
<211> 157  
<212> PRT  
<213> Homo sapiens

<400> 103  
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Trp Gly Glu Lys Arg Asn Thr Ile Ala Ser Ile Ala Ala Gly Val  
20 25 30  
Leu Phe Phe Thr Gly Trp Trp Ile Ile Ile Asp Ala Ala Val Ile  
35 40 45  
Tyr Pro Thr Met Lys Asp Phe Asn His Ser Tyr His Ala Cys Gly  
50 55 60  
Val Ile Ala Thr Ile Ala Phe Leu Met Ile Asn Ala Val Ser Asn  
65 70 75  
Gly Gln Val Arg Gly Asp Ser Tyr Ser Glu Gly Cys Leu Gly Gln  
80 85 90  
Thr Gly Ala Arg Ile Trp Leu Phe Val Gly Phe Met Leu Ala Phe  
95 100 105  
Gly Ser Leu Ile Ala Ser Met Trp Ile Leu Phe Gly Gly Tyr Val  
110 115 120  
Ala Lys Glu Lys Asp Ile Val Tyr Pro Gly Ile Ala Val Phe Phe  
125 130 135  
Gln Asn Ala Phe Ile Phe Phe Gly Gly Leu Val Phe Lys Phe Gly  
140 145 150  
Arg Thr Glu Asp Leu Trp Gln  
155

<210> 104  
<211> 545  
<212> DNA  
<213> Homo sapiens

<400> 104  
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tggatttcta gagggcttga gatgctcaga atgcattgac tggggggaaa 150  
agcgcaatac tattgcttcc attgctgctg gtgtactatt tttacaggc 200  
tgggtgatta tcatagatgc agctgttatt tatccacca tgaagattt 250  
caaccactca taccatgcct gtggtgttat agcaaccata gcttctctaa 300  
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ggttgtctgg gtcaaacagg tgctcgcat tggcttttcg ttggtttcat 400



gttggccttt ggatctctga ttgcattctat gtggattctt tttggagggt 450  
 atgttgctaa agaaaaagac atagtataacc ctggaattgc tgtatttttc 500  
 cagaatgcct tcattctttt tggagggctg gtttttaagt ttggc 545

<210> 105  
 <211> 490  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 31, 39, 108, 145, 179, 219, 412, 479  
 <223> unknown base

<400> 105  
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 agaatgcatt actgggggaa aagcgcaat actattgctt ccattgctgc 100  
 tgggtgnta ttttttacag gctggtggat tatcatagat gcagntgtta 150  
 tttatccac catgaaagat ttcaaccant cataccatgc ctgtgtgtt 200  
 atagcaacca tagccttct aatgattaat cgagtatcga atggacaagt 250  
 ccgaggtgat agttacagtg aaggttgttt gggcacaaca ggtgctcga 300  
 tttggctttt cgttggttct atgttggtct ttgatctct gattgcatct 350  
 atgtggattc ttttggagg ttatgttgc aaagaaaaa acatagtata 400  
 ccctggaatt gntgtattt tccagaatgc ctcatcttt tttggagggc 450  
 tggtttttaa gttggccgc actgaagant tatggcagt 490

<210> 106  
 <211> 466  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 26, 38, 81, 115, 207, 329, 380, 446, 449  
 <223> unknown base

<400> 106  
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 aatgtttgga ttttagagg gcttgagatg ntcagaatgc attgactggg 100  
 ggaaaagcgc aatantattg ctttcattg ctgctggtgt actattttt 150  
 acagggtggt ggattatcat agatgcagct gttatttacc ccaccatgaa 200  
 agatttnaac cactcatacc atgcctgttg tgttatagca accatagcct 250  
 tcctaattgat taatgcagta tcgaatggac aagtcaggg tgatagttac 300  
 agtgaaggtt gtttgggtca aacagggtnt cgcatttggc ttttcgttgg 350  
 ttctatgttg gccttggat ttctgattgn attctatgc gattctcttc 400

ggagggttatg ttgctaaaga aaaagacata gtataccctg gaattnctnt 450

atthttccag aatgcc 466

<210> 107

<211> 377

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 52, 67, 70, 78, 105, 144, 150, 209, 266, 268, 282, 310, 331, 356

<223> unknown base

<400> 107

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antattgctt ccattgntgn tgggtanta tttttttaca ggctggtgga 100

ttatnataga tgcagctgtt atttatccca ccatgaaaga tttnaaccan 150

tcataccatg cctgtggtgt tatagcaacc atagccttcc taatgattaa 200

tgcagtatng aatggacaag tccgaggtga tagttacagt gaaggttgtt 250

tgggtcaaac aggtgntngc atttggcttt tngttggtt catgttggcc 300

tttggatctn tgattgcatt tatgtggatt ntttttggag gttatgttgc 350

taaagnaaaa gacatagtat accctgt 377

<210> 108

<211> 552

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 12, 25, 65, 130, 437, 537

<223> unknown base

<400> 108

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ggcccgccgc ggcgngacac cgggttccgg gaaccattgc acgacggggt 100

ggactgacct gaaaaaaatg tttggatttn tagagggtt gagatgctca 150

gaatgcattg actgggggga aaagcgcaat actattgctt ccattgctgc 200

tgggtgacta ttttttacag gctggtggat tatcatagat gcagctgtta 250

tttatcccac catgaaagat ttcaaccact cataccatgc ctgtggtgtt 300

atagcaacca tagccttctc aatgattaat gcagtatcga atggacaagt 350

ccgaggtgat agttacagtg aaggttgtct ggggtcaaaca ggtgctcgca 400

tttggctttt cgttgggttc atgttggcct ttggatntct gattgcatct 450

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ccctggaatt gctgtatttt tccagaatgc cttcatnttt tttggagggc 550

tg 552

<210> 109  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 109  
gggtggatgg tactgctgca tcc 23

<210> 110  
<211> 26  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 110  
tggtgtgctg tgggaaatca gatgtg 26

<210> 111  
<211> 46  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 111  
gtgtctggag gctgtggcgg ttttgttttc ttgggctaaa atcggg 46

<210> 112  
<211> 3004  
<212> DNA  
<213> Homo sapiens

<400> 112  
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ccgaatcctt tctccgaaga tgtcaaacgg cccccagcgc ccttggtaac 150  
tgacaaggag gccaggaaga aggttctcaa acaagctttt tcagccaacc 200  
aagtgcggga gaagctggat gtggtggtaa ttggcagtgg ctttgggggc 250  
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gccttgaatt tgacacagga atccattaca ttgggcgtat ggaagagggc 400  
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 tcataccac tgcctacgag tggtttgag agtggcagc ggagctgaag 1450  
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 cccgaggtg cctgctacgg ggctgacct gacctgggcc gctgcaccc 1650  
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 cagttatgtc ttgtgtatca gacatacga aggtctcttt gtatgtcgtg 2950  
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 aaaa 3004

<210> 113  
 <211> 610  
 <212> PRT  
 <213> Homo sapiens

<400> 113  
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 20 25 30  
 Asn Pro Phe Ser Glu Asp Val Lys Arg Pro Pro Ala Pro Leu Val  
 35 40 45  
 Thr Asp Lys Glu Ala Arg Lys Lys Val Leu Lys Gln Ala Phe Ser  
 50 55 60  
 Ala Asn Gln Val Pro Glu Lys Leu Asp Val Val Val Ile Gly Ser  
 65 70 75  
 Gly Phe Gly Gly Leu Ala Ala Ala Ala Ile Leu Ala Lys Ala Gly  
 80 85 90  
 Lys Arg Val Leu Val Leu Glu Gln His Thr Lys Ala Gly Gly Cys  
 95 100 105

Cys	His	Thr	Phe	Gly	Lys	Asn	Gly	Leu	Glu	Phe	Asp	Thr	Gly	Ile	110	115	120
His	Tyr	Ile	Gly	Arg	Met	Glu	Glu	Gly	Ser	Ile	Gly	Arg	Phe	Ile	125	130	135
Leu	Asp	Gln	Ile	Thr	Glu	Gly	Gln	Leu	Asp	Trp	Ala	Pro	Leu	Ser	140	145	150
Ser	Pro	Phe	Asp	Ile	Met	Val	Leu	Glu	Gly	Pro	Asn	Gly	Arg	Lys	155	160	165
Glu	Tyr	Pro	Met	Tyr	Ser	Gly	Glu	Lys	Ala	Tyr	Ile	Gln	Gly	Leu	170	175	180
Lys	Glu	Lys	Phe	Pro	Gln	Glu	Glu	Ala	Ile	Ile	Asp	Lys	Tyr	Ile	185	190	195
Lys	Leu	Val	Lys	Val	Val	Ser	Ser	Gly	Ala	Pro	His	Ala	Ile	Leu	200	205	210
Leu	Lys	Phe	Leu	Pro	Leu	Pro	Val	Val	Gln	Leu	Leu	Asp	Arg	Cys	215	220	225
Gly	Leu	Leu	Thr	Arg	Phe	Ser	Pro	Phe	Leu	Gln	Ala	Ser	Thr	Gln	230	235	240
Ser	Leu	Ala	Glu	Val	Leu	Gln	Gln	Leu	Gly	Ala	Ser	Ser	Glu	Leu	245	250	255
Gln	Ala	Val	Leu	Ser	Tyr	Ile	Phe	Pro	Thr	Tyr	Gly	Val	Thr	Pro	260	265	270
Asn	His	Ser	Ala	Phe	Ser	Met	His	Ala	Leu	Leu	Val	Asn	His	Tyr	275	280	285
Met	Lys	Gly	Gly	Phe	Tyr	Pro	Arg	Gly	Gly	Ser	Ser	Glu	Ile	Ala	290	295	300
Phe	His	Thr	Ile	Pro	Val	Ile	Gln	Arg	Ala	Gly	Gly	Ala	Val	Leu	305	310	315
Thr	Lys	Ala	Thr	Val	Gln	Ser	Val	Leu	Leu	Asp	Ser	Ala	Gly	Lys	320	325	330
Ala	Cys	Gly	Val	Ser	Val	Lys	Lys	Gly	His	Glu	Leu	Val	Asn	Ile	335	340	345
Tyr	Cys	Pro	Ile	Val	Val	Ser	Asn	Ala	Gly	Leu	Phe	Asn	Thr	Tyr	350	355	360
Glu	His	Leu	Leu	Pro	Gly	Asn	Ala	Arg	Cys	Leu	Pro	Gly	Val	Lys	365	370	375
Gln	Gln	Leu	Gly	Thr	Val	Arg	Pro	Gly	Leu	Gly	Met	Thr	Ser	Val	380	385	390
Phe	Ile	Cys	Leu	Arg	Gly	Thr	Lys	Glu	Asp	Leu	His	Leu	Pro	Ser	395	400	405
Thr	Asn	Tyr	Tyr	Val	Tyr	Tyr	Asp	Thr	Asp	Met	Asp	Gln	Ala	Met	410	415	420

Glu Arg Tyr Val Ser Met Pro Arg Glu Glu Ala Ala Glu His Ile  
 425 430 435  
 Pro Leu Leu Phe Phe Ala Phe Pro Ser Ala Lys Asp Pro Thr Trp  
 440 445 450  
 Glu Asp Arg Phe Pro Gly Arg Ser Thr Met Ile Met Leu Ile Pro  
 455 460 465  
 Thr Ala Tyr Glu Trp Phe Glu Glu Trp Gln Ala Glu Leu Lys Gly  
 470 475 480  
 Lys Arg Gly Ser Asp Tyr Glu Thr Phe Lys Asn Ser Phe Val Glu  
 485 490 495  
 Ala Ser Met Ser Val Val Leu Lys Leu Phe Pro Gln Leu Glu Gly  
 500 505 510  
 Lys Val Glu Ser Val Thr Ala Gly Ser Pro Leu Thr Asn Gln Phe  
 515 520 525  
 Tyr Leu Ala Ala Pro Arg Gly Ala Cys Tyr Gly Ala Asp His Asp  
 530 535 540  
 Leu Gly Arg Leu His Pro Cys Val Met Ala Ser Leu Arg Ala Gln  
 545 550 555  
 Ser Pro Ile Pro Asn Leu Tyr Leu Thr Gly Gln Asp Ile Phe Thr  
 560 565 570  
 Cys Gly Leu Val Gly Ala Leu Gln Gly Ala Leu Leu Cys Ser Ser  
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 Ala Ile Leu Lys Arg Asn Leu Tyr Ser Asp Leu Lys Asn Leu Asp  
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 Ser Arg Ile Arg Ala Gln Lys Lys Lys Asn  
 605 610

<210> 114  
 <211> 1701  
 <212> DNA  
 <213> Homo sapiens

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 ctattcaaga agaggaagac agcctcaaga gccaagaggg ggaaagtgtc 350  
 acagaagata tcagctttct agagtctcca aatccagaaa acaaggacta 400  
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 ggctaataat attaacatca gaagaatttg tggtttatag cggccacaac 1050  
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<210> 115

<211> 301

<212> PRT

<213> Homo sapiens

<400> 115

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Leu	Ser	Leu	Ala	Ser	Ala	Ser	Ser	Asp	Glu	Glu	Gly	Ser	Gln	Asp
			20					25					30	



Glu	Ser	Leu	Asp	Ser	Lys	Thr	Thr	Leu	Thr	Ser	Asp	Glu	Ser	Val
				35					40					45
Lys	Asp	His	Thr	Thr	Ala	Gly	Arg	Val	Val	Ala	Gly	Gln	Ile	Phe
				50					55					60
Leu	Asp	Ser	Glu	Glu	Ser	Glu	Leu	Glu	Ser	Ser	Ile	Gln	Glu	Glu
				65					70					75
Glu	Asp	Ser	Leu	Lys	Ser	Gln	Glu	Gly	Glu	Ser	Val	Thr	Glu	Asp
				80					85					90
Ile	Ser	Phe	Leu	Glu	Ser	Pro	Asn	Pro	Glu	Asn	Lys	Asp	Tyr	Glu
				95					100					105
Glu	Pro	Lys	Lys	Val	Arg	Lys	Pro	Ala	Leu	Thr	Ala	Ile	Glu	Gly
				110					115					120
Thr	Ala	His	Gly	Glu	Pro	Cys	His	Phe	Pro	Phe	Leu	Phe	Leu	Asp
				125					130					135
Lys	Glu	Tyr	Asp	Glu	Cys	Thr	Ser	Asp	Gly	Arg	Glu	Asp	Gly	Arg
				140					145					150
Leu	Trp	Cys	Ala	Thr	Thr	Tyr	Asp	Tyr	Lys	Ala	Asp	Glu	Lys	Trp
				155					160					165
Gly	Phe	Cys	Glu	Thr	Glu	Glu	Glu	Ala	Ala	Lys	Arg	Arg	Gln	Met
				170					175					180
Gln	Glu	Ala	Glu	Met	Met	Tyr	Gln	Thr	Gly	Met	Lys	Ile	Leu	Asn
				185					190					195
Gly	Ser	Asn	Lys	Lys	Ser	Gln	Lys	Arg	Glu	Ala	Tyr	Arg	Tyr	Leu
				200					205					210
Gln	Lys	Ala	Ala	Ser	Met	Asn	His	Thr	Lys	Ala	Leu	Glu	Arg	Val
				215					220					225
Ser	Tyr	Ala	Leu	Leu	Phe	Gly	Asp	Tyr	Leu	Pro	Gln	Asn	Ile	Gln
				230					235					240
Ala	Ala	Arg	Glu	Met	Phe	Glu	Lys	Leu	Thr	Glu	Glu	Gly	Ser	Pro
				245					250					255
Lys	Gly	Gln	Thr	Ala	Leu	Gly	Phe	Leu	Tyr	Ala	Ser	Gly	Leu	Gly
				260					265					270
Val	Asn	Ser	Ser	Gln	Ala	Lys	Ala	Leu	Val	Tyr	Tyr	Thr	Phe	Gly
				275					280					285
Ala	Leu	Gly	Gly	Asn	Leu	Ile	Ala	His	Met	Val	Leu	Val	Ser	Arg
				290					295					300

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<210> 116  
 <211> 584  
 <212> DNA  
 <213> Homo sapiens  
 <400> 116

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<210> 117  
 <211> 123  
 <212> PRT  
 <213> Homo sapiens

<400> 117  
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 Phe Pro Gly Gln Val Ala Gln Leu Ser Cys Thr Leu Ser Pro Gln  
 35 40 45  
 His Val Thr Ile Arg Asp Tyr Gly Val Ser Trp Tyr Gln Gln Arg  
 50 55 60  
 Ala Gly Ser Ala Pro Arg Tyr Leu Leu Tyr Tyr Arg Ser Glu Glu  
 65 70 75  
 Asp His His Arg Pro Ala Asp Ile Pro Asp Arg Phe Ser Ala Ala  
 80 85 90  
 Lys Asp Glu Ala His Asn Ala Cys Val Leu Thr Ile Ser Pro Val  
 95 100 105  
 Gln Pro Glu Asp Asp Ala Asp Tyr Tyr Cys Ser Val Gly Tyr Gly  
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 Phe Ser Pro

<210> 118  
 <211> 3402  
 <212> DNA  
 <213> Homo sapiens  
 <400> 118

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 <211> 504  
 <212> PRT  
 <213> Homo sapiens

<400> 119  
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 35 40 45  
 Thr Val Arg Leu Gln Cys Pro Val Glu Gly Asp Pro Pro Leu  
 50 55 60  
 Thr Met Trp Thr Lys Asp Gly Arg Thr Ile His Ser Gly Trp Ser  
 65 70 75  
 Arg Phe Arg Val Leu Pro Gln Gly Leu Lys Val Lys Gln Val Glu  
 80 85 90  
 Arg Glu Asp Ala Gly Val Tyr Val Cys Lys Ala Thr Asn Gly Phe  
 95 100 105  
 Gly Ser Leu Ser Val Asn Tyr Thr Leu Val Val Leu Asp Asp Ile  
 110 115 120  
 Ser Pro Gly Lys Glu Ser Leu Gly Pro Asp Ser Ser Ser Gly Gly  
 125 130 135  
 Gln Glu Asp Pro Ala Ser Gln Gln Trp Ala Arg Pro Arg Phe Thr  
 140 145 150  
 Gln Pro Ser Lys Met Arg Arg Arg Val Ile Ala Arg Pro Val Gly  
 155 160 165  
 Ser Ser Val Arg Leu Lys Cys Val Ala Ser Gly His Pro Arg Pro  
 170 175 180  
 Asp Ile Thr Trp Met Lys Asp Asp Gln Ala Leu Thr Arg Pro Gly  
 185 190 195  
 Ala Ala Glu Pro Arg Lys Lys Lys Trp Thr Leu Ser Leu Lys Asn  
 200 205 210  
 Leu Arg Pro Glu Asp Ser Gly Lys Tyr Thr Cys Arg Val Ser Asn  
 215 220 225  
 Arg Ala Gly Ala Ile Asn Ala Thr Tyr Lys Val Asp Val Ile Gln  
 230 235 240

Arg Thr Arg Ser	Lys Pro Val Leu Thr	Gly Thr His Pro Val Asn
	245	250
Thr Thr Val Asp	Phe Gly Gly Thr Thr	Ser Phe Gln Cys Lys Val
	260	265
Arg Ser Asp Val	Lys Pro Val Ile Gln	Trp Leu Lys Arg Val Glu
	275	280
Tyr Gly Ala Glu	Gly Arg His Asn Ser	Thr Ile Asp Val Gly Gly
	290	295
Gln Lys Phe Val	Val Leu Pro Thr Gly	Asp Val Trp Ser Arg Pro
	305	310
Asp Gly Ser Tyr	Leu Asn Lys Leu Leu	Ile Thr Arg Ala Arg Gln
	320	325
Asp Asp Ala Gly	Met Tyr Ile Cys Leu	Gly Ala Asn Thr Met Gly
	335	340
Tyr Ser Phe Arg	Ser Ala Phe Leu Thr	Val Leu Pro Asp Pro Lys
	350	355
Pro Pro Gly Pro	Pro Val Ala Ser Ser	Ser Ser Ala Thr Ser Leu
	365	370
Pro Trp Pro Val	Val Ile Gly Ile Pro	Ala Gly Ala Val Phe Ile
	380	385
Leu Gly Thr Leu	Leu Leu Trp Leu Cys	Gln Ala Gln Lys Lys Pro
	395	400
Cys Thr Pro Ala	Pro Ala Pro Pro Leu	Pro Gly His Arg Pro Pro
	410	415
Gly Thr Ala Arg	Asp Arg Ser Gly Asp	Lys Asp Leu Pro Ser Leu
	425	430
Ala Ala Leu Ser	Ala Gly Pro Gly Val	Gly Leu Cys Glu Glu His
	440	445
Gly Ser Pro Ala	Ala Pro Gln His Leu	Leu Gly Pro Gly Pro Val
	455	460
Ala Gly Pro Lys	Leu Tyr Pro Lys Leu	Tyr Thr Asp Ile His Thr
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His Thr His Thr	His Ser His Thr His	Ser His Val Glu Gly Lys
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<210> 120

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 120

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<210> 121

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 121

cggttcgaca cgcgcaaggt g 21

<210> 122

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 122

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<210> 123

<211> 4420

<212> DNA

<213> Homo sapiens

<400> 123

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 <212> PRT  
 <213> Homo sapiens

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 35 40 45  
 Pro Ala Asp Thr Leu Glu Ser Pro Gly Glu Trp Thr Thr Trp Phe  
 50 55 60  
 Asn Ile Asp Tyr Pro Gly Gly Lys Gly Asp Tyr Glu Arg Leu Asp  
 65 70 75  
 Ala Ile Arg Phe Tyr Tyr Gly Asp Arg Val Cys Ala Arg Pro Leu  
 80 85 90  
 Arg Leu Glu Ala Arg Thr Thr Asp Trp Thr Pro Ala Gly Ser Thr  
 95 100 105  
 Gly Gln Val Val His Gly Ser Pro Arg Glu Gly Phe Trp Cys Leu  
 110 115 120  
 Asn Arg Glu Gln Arg Pro Gly Gln Asn Cys Ser Asn Tyr Thr Val  
 125 130 135  
 Arg Phe Leu Cys Pro Pro Gly Ser Leu Arg Arg Asp Thr Glu Arg  
 140 145 150  
 Ile Trp Ser Pro Trp Ser Pro Trp Ser Lys Cys Ser Ala Ala Cys  
 155 160 165  
 Gly Gln Thr Gly Val Gln Thr Arg Thr Arg Ile Cys Leu Ala Glu  
 170 175 180  
 Met Val Ser Leu Cys Ser Glu Ala Ser Glu Glu Gly Gln His Cys  
 185 190 195  
 Met Gly Gln Asp Cys Thr Ala Cys Asp Leu Thr Cys Pro Met Gly  
 200 205 210

Gln Val Asn Ala	Asp Cys Asp Ala Cys	Met Cys Gln Asp Phe	Met
	215	220	225
Leu His Gly Ala	Val Ser Leu Pro Gly	Gly Ala Pro Ala Ser	Gly
	230	235	240
Ala Ala Ile Tyr	Leu Leu Thr Lys Thr	Pro Lys Leu Leu Thr	Gln
	245	250	255
Thr Asp Ser Asp	Gly Arg Phe Arg Ile	Pro Gly Leu Cys Pro	Asp
	260	265	270
Gly Lys Ser Ile	Leu Lys Ile Thr Lys	Val Lys Phe Ala Pro	Ile
	275	280	285
Val Leu Thr Met	Pro Lys Thr Ser Leu	Lys Ala Ala Thr Ile	Lys
	290	295	300
Ala Glu Phe Val	Arg Ala Glu Thr Pro	Tyr Met Val Met Asn	Pro
	305	310	315
Glu Thr Lys Ala	Arg Arg Ala Gly Gln	Ser Val Ser Leu Cys	Cys
	320	325	330
Lys Ala Thr Gly	Lys Pro Arg Pro Asp	Lys Tyr Phe Trp Tyr	His
	335	340	345
Asn Asp Thr Leu	Leu Asp Pro Ser Leu	Tyr Lys His Glu Ser	Lys
	350	355	360
Leu Val Leu Arg	Lys Leu Gln Gln His	Gln Ala Gly Glu Tyr	Phe
	365	370	375
Cys Lys Ala Gln	Ser Asp Ala Gly Ala	Val Lys Ser Lys Val	Ala
	380	385	390
Gln Leu Ile Val	Thr Ala Ser Asp Glu	Thr Pro Cys Asn Pro	Val
	395	400	405
Pro Glu Ser Tyr	Leu Ile Arg Leu Pro	His Asp Cys Phe Gln	Asn
	410	415	420
Ala Thr Asn Ser	Phe Tyr Tyr Asp Val	Gly Arg Cys Pro Val	Lys
	425	430	435
Thr Cys Ala Gly	Gln Gln Asp Asn Gly	Ile Arg Cys Arg Asp	Ala
	440	445	450
Val Gln Asn Cys	Cys Gly Ile Ser Lys	Thr Glu Glu Arg Glu	Ile
	455	460	465
Gln Cys Ser Gly	Tyr Thr Leu Pro Thr	Lys Val Ala Lys Glu	Cys
	470	475	480
Ser Cys Gln Arg	Cys Thr Glu Thr Arg	Ser Ile Val Arg Gly	Arg
	485	490	495
Val Ser Ala Ala	Asp Asn Gly Glu Pro	Met Arg Phe Gly His	Val
	500	505	510
Tyr Met Gly Asn	Ser Arg Val Ser Met	Thr Gly Tyr Lys Gly	Thr
	515	520	525

Phe Thr Leu His	Val Pro Gln Asp Thr	Glu Arg Leu Val Leu Thr	530	535	540
Phe Val Asp Arg	Leu Gln Lys Phe Val	Asn Thr Thr Lys Val Leu	545	550	555
Pro Phe Asn Lys	Lys Gly Ser Ala Val	Phe His Glu Ile Lys Met	560	565	570
Leu Arg Arg Lys	Glu Pro Ile Thr Leu	Glu Ala Met Glu Thr Asn	575	580	585
Ile Ile Pro Leu	Gly Glu Val Val Gly	Glu Asp Pro Met Ala Glu	590	595	600
Leu Glu Ile Pro	Ser Arg Ser Phe Tyr	Arg Gln Asn Gly Glu Pro	605	610	615
Tyr Ile Gly Lys	Val Lys Ala Ser Val	Thr Phe Leu Asp Pro Arg	620	625	630
Asn Ile Ser Thr	Ala Thr Ala Ala Gln	Thr Asp Leu Asn Phe Ile	635	640	645
Asn Asp Glu Gly	Asp Thr Phe Pro Leu	Arg Thr Tyr Gly Met Phe	650	655	660
Ser Val Asp Phe	Arg Asp Glu Val Thr	Ser Glu Pro Leu Asn Ala	665	670	675
Gly Lys Val Lys	Val His Leu Asp Ser	Thr Gln Val Lys Met Pro	680	685	690
Glu His Ile Ser	Thr Val Lys Leu Trp	Ser Leu Asn Pro Asp Thr	695	700	705
Gly Leu Trp Glu	Glu Glu Gly Asp Phe	Lys Phe Glu Asn Gln Arg	710	715	720
Arg Asn Lys Arg	Glu Asp Arg Thr Phe	Leu Val Gly Asn Leu Glu	725	730	735
Ile Arg Glu Arg	Arg Leu Phe Asn Leu	Asp Val Pro Glu Ser Arg	740	745	750
Arg Cys Phe Val	Lys Val Arg Ala Tyr	Arg Ser Glu Arg Phe Leu	755	760	765
Pro Ser Glu Gln	Ile Gln Gly Val Val	Ile Ser Val Ile Asn Leu	770	775	780
Glu Pro Arg Thr	Gly Phe Leu Ser Asn	Pro Arg Ala Trp Gly Arg	785	790	795
Phe Asp Ser Val	Ile Thr Gly Pro Asn	Gly Ala Cys Val Pro Ala	800	805	810
Phe Cys Asp Asp	Gln Ser Pro Asp Ala	Tyr Ser Ala Tyr Val Leu	815	820	825
Ala Ser Leu Ala	Gly Glu Glu Leu Gln	Ala Val Glu Ser Ser Pro	830	835	840

Lys Phe Asn Pro	Asn Ala Ile Gly Val	Pro Gln Pro Tyr Leu Asn
845	850	855
Lys Leu Asn Tyr	Arg Arg Thr Asp His	Glu Asp Pro Arg Val Lys
860	865	870
Lys Thr Ala Phe	Gln Ile Ser Met Ala	Lys Pro Arg Pro Asn Ser
875	880	885
Ala Glu Glu Ser	Asn Gly Pro Ile Tyr	Ala Phe Glu Asn Leu Arg
890	895	900
Ala Cys Glu Glu	Ala Pro Pro Ser Ala	Ala His Phe Arg Phe Tyr
905	910	915
Gln Ile Glu Gly	Asp Arg Tyr Asp Tyr	Asn Thr Val Pro Phe Asn
920	925	930
Glu Asp Asp Pro	Met Ser Trp Thr Glu	Asp Tyr Leu Ala Trp Trp
935	940	945
Pro Lys Pro Met	Glu Phe Arg Ala Cys	Tyr Ile Lys Val Lys Ile
950	955	960
Val Gly Pro Leu	Glu Val Asn Val Arg	Ser Arg Asn Met Gly Gly
965	970	975
Thr His Arg Arg	Thr Val Gly Lys Leu	Tyr Gly Ile Arg Asp Val
980	985	990
Arg Ser Thr Arg	Asp Arg Asp Gln Pro	Asn Val Ser Ala Ala Cys
995	1000	1005
Leu Glu Phe Lys	Cys Ser Gly Met Leu	Tyr Asp Gln Asp Arg Val
1010	1015	1020
Asp Arg Thr Leu	Val Lys Val Ile Pro	Gln Gly Ser Cys Arg Arg
1025	1030	1035
Ala Ser Val Asn	Pro Met Leu His Glu	Tyr Leu Val Asn His Leu
1040	1045	1050
Pro Leu Ala Val	Asn Asn Asp Thr Ser	Glu Tyr Thr Met Leu Ala
1055	1060	1065
Pro Leu Asp Pro	Leu Gly His Asn Tyr	Gly Ile Tyr Thr Val Thr
1070	1075	1080
Asp Gln Asp Pro	Arg Thr Ala Lys Glu	Ile Ala Leu Gly Arg Cys
1085	1090	1095
Phe Asp Gly Thr	Ser Asp Gly Ser Ser	Arg Ile Met Lys Ser Asn
1100	1105	1110
Val Gly Val Ala	Leu Thr Phe Asn Cys	Val Glu Arg Gln Val Gly
1115	1120	1125
Arg Gln Ser Ala	Phe Gln Tyr Leu Gln	Ser Thr Pro Ala Gln Ser
1130	1135	1140
Pro Ala Ala Gly	Thr Val Gln Gly Arg	Val Pro Ser Arg Arg Gln
1145	1150	1155

Gln Arg Ala Ser Arg Gly Gly Gln Arg Gln Gly Gly Val Val Ala  
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Ser Leu Arg Phe Pro Arg Val Ala Gln Gln Pro Leu Ile Asn  
 1175 1180

<210> 125  
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 <213> Artificial Sequence

<220>  
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<400> 125  
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<210> 126  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 126  
 ccattgtgca ggtcagggtca cag 23

<210> 127  
 <211> 40  
 <212> DNA  
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<220>  
 <223> Synthetic oligonucleotide probe

<400> 127  
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<210> 128  
 <211> 2819  
 <212> DNA  
 <213> Homo sapiens

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 ttgggatctg ctttgagggtc ccattcttc ttaaaaaaaaa atacagagac 150  
 ctacctacc gtagcgtac atacatatgt gtatatatat gtaactaga 200  
 caaagatcgc agatcataaa gcaagctctg ctttagtttc caagaagatt 250  
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 gattacatgg cctgccagcc ggaatccacg gacatgacaa aatatctgaa 450

agtgaacctc gatcctccgg atattacctg tggagacctc cctgagacct 500  
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 aaaaaaaaaa aaaaaaaaaa 2819

<210> 129  
 <211> 438  
 <212> PRT  
 <213> Homo sapiens

<400> 129  
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 Val Ser Ser Val Met Gln Pro Tyr Pro Leu Val Trp Gly His Tyr  
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 35 40 45  
 Asp Tyr Met Ala Cys Gln Pro Glu Ser Thr Asp Met Thr Lys Tyr  
 50 55 60  
 Leu Lys Val Lys Leu Asp Pro Pro Asp Ile Thr Cys Gly Asp Pro  
 65 70 75  
 Pro Glu Thr Phe Cys Ala Met Gly Asn Pro Tyr Met Cys Asn Asn  
 80 85 90  
 Glu Cys Asp Ala Ser Thr Pro Glu Leu Ala His Pro Pro Glu Leu  
 95 100 105  
 Met Phe Asp Phe Glu Gly Arg His Pro Ser Thr Phe Trp Gln Ser  
 110 115 120  
 Ala Thr Trp Lys Glu Tyr Pro Lys Pro Leu Gln Val Asn Ile Thr



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Leu Ser Trp Ser	Lys Thr Ile Glu Leu	Thr Asp Asn Ile Val	Ile		
	140		145		150
Thr Phe Glu Ser	Gly Arg Pro Asp Gln	Met Ile Leu Glu Lys	Ser		
	155		160		165
Leu Asp Tyr Gly	Arg Thr Trp Gln Pro	Tyr Gln Tyr Tyr Ala	Thr		
	170		175		180
Asp Cys Leu Asp	Ala Phe His Met Asp	Pro Lys Ser Val Lys	Asp		
	185		190		195
Leu Ser Gln His	Thr Val Leu Glu Ile	Ile Cys Thr Glu Glu	Tyr		
	200		205		210
Ser Thr Gly Tyr	Thr Thr Asn Ser Lys	Ile Ile His Phe Glu	Ile		
	215		220		225
Lys Asp Arg Phe	Ala Leu Phe Ala Gly	Pro Arg Leu Arg Asn	Met		
	230		235		240
Ala Ser Leu Tyr	Gly Gln Leu Asp Thr	Thr Lys Lys Leu Arg	Asp		
	245		250		255
Phe Phe Thr Val	Thr Asp Leu Arg Ile	Arg Leu Leu Arg Pro	Ala		
	260		265		270
Val Gly Glu Ile	Phe Val Asp Glu Leu	His Leu Ala Arg Tyr	Phe		
	275		280		285
Tyr Ala Ile Ser	Asp Ile Lys Val Arg	Gly Arg Cys Lys Cys	Asn		
	290		295		300
Leu His Ala Thr	Val Cys Val Tyr Asp	Asn Ser Lys Leu Thr	Cys		
	305		310		315
Glu Cys Glu His	Asn Thr Thr Gly Pro	Asp Cys Gly Lys Cys	Lys		
	320		325		330
Lys Asn Tyr Gln	Gly Arg Pro Trp Ser	Pro Gly Ser Tyr Leu	Pro		
	335		340		345
Ile Pro Lys Gly	Thr Ala Asn Thr Cys	Ile Pro Ser Ile Ser	Ser		
	350		355		360
Ile Gly Thr Asn	Val Cys Asp Asn Glu	Leu Leu His Cys Gln	Asn		
	365		370		375
Gly Gly Thr Cys	His Asn Asn Val Arg	Cys Leu Cys Pro Ala	Ala		
	380		385		390
Tyr Thr Gly Ile	Leu Cys Glu Lys Leu	Arg Cys Glu Glu Ala	Gly		
	395		400		405
Ser Cys Gly Ser	Asp Ser Gly Gln Gly	Ala Pro Pro His Gly	Thr		
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Pro Ala Leu Leu	Leu Leu Thr Thr Leu	Leu Gly Thr Ala Ser	Pro		
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Leu Val Phe					

<210> 130  
 <211> 24  
 <212> DNA  
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 <223> Synthetic oligonucleotide probe  
  
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 <210> 131  
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 aggttcaggg acagcaagtt tggg 24  
  
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 <213> Artificial Sequence  
  
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 <400> 133  
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 <212> DNA  
 <213> Homo sapiens  
  
 <400> 134  
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ttgtgacttt agtatacatt tttcttcttt cggggacgtg gcctgcattg 350  
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 gaaaaaattc aggaggagct caagttgcag cctccagcgg ttctcactct 600  
 ggaggacaca gatgtggcaa atggggtgat gaatggtcac acaccgatgc 650  
 acttgagacc tgctcctaatt ttccgaatgg aaccagtga agccctgggt 700  
 atcctctccc tcattctcaa catcatgtgt gctgccctga atctcattcg 750  
 aggagttcac cttgcagaac attctttaca ggatccaagg agctggttct 800  
 gctggttgga ccaaacctcg tgagccagcc acccctgacc caaatgagga 850  
 gagctctgat tctccatcc gggagcagtg atgtcaaact tctgctgctg 900  
 gggaaatctc atcagcagg agcctgtgga aaagggcatg tcagtgaat 950  
 ctgggaatgg ctggattcgg aaacatctgc ccatgtgtat tgatggcaga 1000  
 gctgttgccc acaagcgctt tttatttagg gtaaaaataa caaatccatt 1050  
 ctattcctct gaccocatgct tagtacatat gacctttaac ccttacattt 1100  
 atatgattct ggggttgctt cagaagtgtt atttcatgaa tcattcatat 1150  
 gatttgatoc ccaggattc tattttgttt aatgggcttt tctactaaaa 1200  
 gcataaaata ctgaggctga tttagtcagg gcaaaaacct ttactttaca 1250  
 tattcgtttt caatacttgc tgttcattgt acacaagctt cttacggttt 1300  
 tcttgtaaca ataaatat ttagtaata atgggtacat ttaacaaac 1350  
 tcagtagtac aacctaaact tgtataaaag tgtgtaaaaa tgtatagcca 1400  
 tttatatcct atgtataaat taaatgaggt ggcttcagaa atggcagaat 1450  
 aaatctaaag tgtttattaa aaaaaaaaaa aaaaaaaaaa aag 1493

<210> 135  
 <211> 228  
 <212> PRT  
 <213> Homo sapiens

<400> 135  
 Met Ser Val Ile Phe Phe Ala Cys Val Val Arg Val Arg Asp Gly  
 1 5 10  
 Leu Pro Leu Ser Ala Ser Thr Asp Phe Tyr His Thr Gln Asp Phe  
 20 25 30  
 Leu Glu Trp Arg Arg Arg Leu Lys Ser Leu Ala Leu Arg Leu Ala  
 35 40 45

Gln	Tyr	Pro	Gly	Arg	Gly	Ser	Ala	Glu	Gly	Cys	Asp	Phe	Ser	Ile	50	55	60
His	Phe	Ser	Ser	Phe	Gly	Asp	Val	Ala	Cys	Met	Ala	Ile	Cys	Ser	65	70	75
Cys	Gln	Cys	Pro	Ala	Ala	Met	Ala	Phe	Cys	Phe	Leu	Glu	Thr	Leu	80	85	90
Trp	Trp	Glu	Phe	Thr	Ala	Ser	Tyr	Asp	Thr	Thr	Cys	Ile	Gly	Leu	95	100	105
Ala	Ser	Arg	Pro	Tyr	Ala	Phe	Leu	Glu	Phe	Asp	Ser	Ile	Ile	Gln	110	115	120
Lys	Val	Lys	Trp	His	Phe	Asn	Tyr	Val	Ser	Ser	Ser	Gln	Met	Glu	125	130	135
Cys	Ser	Leu	Glu	Lys	Ile	Gln	Glu	Glu	Leu	Lys	Leu	Gln	Pro	Pro	140	145	150
Ala	Val	Leu	Thr	Leu	Glu	Asp	Thr	Asp	Val	Ala	Asn	Gly	Val	Met	155	160	165
Asn	Gly	His	Thr	Pro	Met	His	Leu	Glu	Pro	Ala	Pro	Asn	Phe	Arg	170	175	180
Met	Glu	Pro	Val	Thr	Ala	Leu	Gly	Ile	Leu	Ser	Leu	Ile	Leu	Asn	185	190	195
Ile	Met	Cys	Ala	Ala	Leu	Asn	Leu	Ile	Arg	Gly	Val	His	Leu	Ala	200	205	210
Glu	His	Ser	Leu	Gln	Asp	Pro	Arg	Ser	Trp	Phe	Cys	Trp	Leu	Asp	215	220	225
Gln	Thr	Ser															

<210> 136  
 <211> 239  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 39, 61, 143, 209  
 <223> unknown base

<400> 136  
 tgcttcctgg agacctgtg gtgggaattc acagcttcnt atgacactac 50  
 ctgcattggc ntggcctcca ggccataogc ttttcttgag tttgacagca 100  
 tcattcagaa agtgaagtgg cattttaact atgtaagttc ctntcagatg 150  
 gagtgcagct tggaataaat tcaggaggag ctcaagttgc agcctccagc 200  
 gggttcctcant atggaggaca cagatgtggc aaatgggggt 239

<210> 137  
 <211> 2300  
 <212> DNA

<213> Homo sapiens

<400> 137

ctcagcgcg cttcctcgta gcgagcctag tggcgggtgt ttgcattgaa 50  
acgtgagcgc gacccgacct taaagagtgg ggagcaaagg gaggacagag 100  
ccctttaaaa cgagcggggt ggtgcctgcc cctttaaggg cggggcgtcc 150  
ggacgactgt atctgagccc cagactgccc cgagttttctg tcgcaggctg 200  
cgaggaaaagg cccctaggtt gggctctgggt gcttggcggc ggcggcttcc 250  
tccccgctcg tctctcccg gcccagaggc acctcggctt cagtcatgct 300  
gagcagagta tggaagcacc tgactacgaa gtgctatccg tgcgagaaca 350  
gtctattccac gagaggatcc gcgagtgtat tatatcaaca cttctgtttg 400  
caacactgta catcctctgc cacatcttcc tgacccgctt caagaagcct 450  
gtctgagtta ccacagtgga tgatgaagat gccaccgtca acaagattgc 500  
gtctgagctg tgcaccttta ccttggcaat tgccctgggt gctgtcctgc 550  
tcttgccctt ctccatcacc agcaatgagg tgctgtcttc cctgcctcgg 600  
aactactaca tccagtggct caacggctcc ctcatccatg gcctctggaa 650  
cctgtttttt ctcttcccca acctgtccct catcttcttc atgcccttg 700  
catatttctt cactgagtct gagggctttg ctggctccag aaagggtgtc 750  
ctgggccggg tctatgagac agtgggtgatg ttgatgtccc tcaactgtct 800  
ggtgctaggt atggtgtggg tggcatcagc cattgtggac aagaacaagg 850  
ccaacagaga gtcactctat gacttttggg agtactatct cccctacctc 900  
tactcatgca tctccttctt tgggttctg ctgctcctgg tgtgtactcc 950  
actgggtctc gcccgcatgt tctccgtcac tgggaagctg ctagtcaagc 1000  
cccggctgct ggaagacctg gaggagcagc tgtactgttc agcctttgag 1050  
gaggcagccc tgaccgcgag gatctgtaat cctacttctt gctggctgcc 1100  
tttagacatg gagctgctac acagacaggt cctggctctg cagacacaga 1150  
gggtcctgct ggagaagagg cggaaggctt cagcctggca acggaacctg 1200  
ggctaocccc tggctatgct gtgcttgctg gtgctgacgg gcctgtctgt 1250  
gtcattgtgt gccatccaca tcctggagct gctcatogat gaggctgcc 1300  
tgccccgagg catgcagggt acctccttag gccaggcttc cttctccaag 1350  
ctgggtcctt ttgggtccgt cattcaggtt gtactcatct ttacctaata 1400  
ggtgtctcca gttgtgggct tctatagctc tccactcttc cgagacctgc 1450  
ggcccagatg gcacgacact gccatgacgc agataattgg gaactgtgtc 1500

tgtctcctgg tcctaagctc agcacttctt gtcttctctc gaacctctgg 1550  
 gctcactcgc tttagactgc tgggtgactt tggacgcttc aactggctgg 1600  
 gcaatttcta cattgtgttc ctctacaacg cagccttttg aggccctacc 1650  
 acactctgtc tggatgaagac ctctactgca gctgtgcggg cagagctgat 1700  
 ccgggccttt gggctggaca gactgccgct gcccgctctc ggtttccccc 1750  
 aggcattctag gaagaccag caccagtgc ctccagctgg gggtaggaag 1800  
 gaaaaaactg gacactgcca tctgctgctt aggcctggag ggaagcccaa 1850  
 ggctacttgg acctcaggac ctggaatctg agagggtggg tggcagaggg 1900  
 gagcagagcc atctgcaata ttgcataatc tgagccagag tttgggacca 1950  
 ggacctctctg cttttccata cttactgtg gcctcagcat ggggtagggc 2000  
 tgggtgactg ggtctagccc ctgatcccaa atctgtttac acatcaatct 2050  
 gcctcactgc tgttctgggc catccccata gccatgttta catgatttga 2100  
 tgtgcaatag ggtggggtag gggcagggaa aggactgggc cagggcaggc 2150  
 tcgggagata gattgtctcc ctgacctctg gccagcaga gcctaagcac 2200  
 tgtgctatcc tggaggggct ttggaccacc tgaagacca aggggatag 2250  
 gaggaggagg ctctagccat cagcaataaa gttgatccca gggaaaaaaa 2300

<210> 138  
 <211> 489  
 <212> PRT  
 <213> Homo sapiens

<400> 138  
 Met Glu Ala Pro Asp Tyr Glu Val Leu Ser Val Arg Glu Gln Leu  
 1 5 10 15  
 Phe His Glu Arg Ile Arg Glu Cys Ile Ile Ser Thr Leu Leu Phe  
 20 25 30  
 Ala Thr Leu Tyr Ile Leu Cys His Ile Phe Leu Thr Arg Phe Lys  
 35 40 45  
 Lys Pro Ala Glu Phe Thr Thr Val Asp Asp Glu Asp Ala Thr Val  
 50 55 60  
 Asn Lys Ile Ala Leu Glu Leu Cys Thr Phe Thr Leu Ala Ile Ala  
 65 70 75  
 Leu Gly Ala Val Leu Leu Leu Pro Phe Ser Ile Ile Ser Asn Glu  
 80 85 90  
 Val Leu Leu Ser Leu Pro Arg Asn Tyr Tyr Ile Gln Trp Leu Asn  
 95 100 105  
 Gly Ser Leu Ile His Gly Leu Trp Asn Leu Val Phe Leu Phe Pro  
 110 115 120  
 Asn Leu Ser Leu Ile Phe Leu Met Pro Phe Ala Tyr Phe Phe Thr

	125		130		135
Glu Ser Glu Gly	Phe Ala Gly Ser Arg	Lys Gly Val Leu Gly	Arg		
	140	145	150		
Val Tyr Glu Thr	Val Val Met Leu Met	Leu Leu Thr Leu Leu	Val		
	155	160	165		
Leu Gly Met Val	Trp Val Ala Ser Ala	Ile Val Asp Lys Asn	Lys		
	170	175	180		
Ala Asn Arg Glu	Ser Leu Tyr Asp Phe	Trp Glu Tyr Tyr Leu	Pro		
	185	190	195		
Tyr Leu Tyr Ser	Cys Ile Ser Phe Leu	Gly Val Leu Leu Leu	Leu		
	200	205	210		
Val Cys Thr Pro	Leu Gly Leu Ala Arg	Met Phe Ser Val Thr	Gly		
	215	220	225		
Lys Leu Leu Val	Lys Pro Arg Leu Leu	Glu Asp Leu Glu Glu	Gln		
	230	235	240		
Leu Tyr Cys Ser	Ala Phe Glu Glu Ala	Ala Leu Thr Arg Arg	Ile		
	245	250	255		
Cys Asn Pro Thr	Ser Cys Trp Leu Pro	Leu Asp Met Glu Leu	Leu		
	260	265	270		
His Arg Gln Val	Leu Ala Leu Gln Thr	Gln Arg Val Leu Leu	Glu		
	275	280	285		
Lys Arg Arg Lys	Ala Ser Ala Trp Gln	Arg Asn Leu Gly Tyr	Pro		
	290	295	300		
Leu Ala Met Leu	Cys Leu Leu Val Leu	Thr Gly Leu Ser Val	Leu		
	305	310	315		
Ile Val Ala Ile	His Ile Leu Glu Leu	Leu Ile Asp Glu Ala	Ala		
	320	325	330		
Met Pro Arg Gly	Met Gln Gly Thr Ser	Leu Gly Gln Val Ser	Phe		
	335	340	345		
Ser Lys Leu Gly	Ser Phe Gly Ala Val	Ile Gln Val Val Leu	Ile		
	350	355	360		
Phe Tyr Leu Met	Val Ser Ser Val Val	Gly Phe Tyr Ser Ser	Pro		
	365	370	375		
Leu Phe Arg Ser	Leu Arg Pro Arg Trp	His Asp Thr Ala Met	Thr		
	380	385	390		
Gln Ile Ile Gly	Asn Cys Val Cys Leu	Leu Val Leu Ser Ser	Ala		
	395	400	405		
Leu Pro Val Phe	Ser Arg Thr Leu Gly	Leu Thr Arg Phe Asp	Leu		
	410	415	420		
Leu Gly Asp Phe	Gly Arg Phe Asn Trp	Leu Gly Asn Phe Tyr	Ile		
	425	430	435		
Val Phe Leu Tyr	Asn Ala Ala Phe Ala	Gly Leu Thr Thr Leu	Cys		

440	445	450
Leu Val Lys Thr	Phe Thr Ala Ala Val Arg Ala Glu Leu Ile Arg	
455	460	465
Ala Phe Gly Leu Asp Arg Leu Pro Leu Pro Val Ser Gly Phe Pro		
470	475	480
Gln Ala Ser Arg Lys Thr Gln His Gln		
485		

<210> 139  
 <211> 294  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 53, 57  
 <223> unknown base

<400> 139  
 ggctgcccag ggaaggcccc ttgggttggt ctgtgtgtct tggcggcgcc 50  
 ggnntctctcc ccgctcgtcc tccccggggc cagaggcacc tcggcttcag 100  
 tcatgctgag cagagtatgg aagcacctga ctacgaagtg ctatccgtgc 150  
 gagaacagct attccacgag aggatccgag agtgtattat atcaacactt 200  
 ctgtttgcaa cactgtacat cctctgccac atcttcctga ccgcttcaa 250  
 gaagcctgct gagttcacca cagtggatga tgaagatgcc accg 294

<210> 140  
 <211> 526  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 197, 349  
 <223> unknown base

<400> 140  
 gaccgacctt aaagagtggg agcaaaggga ggacagagcc ttttaaaacg 50  
 aggcgggtggt gcctgccctt taaggcgagg gogtcgggac gactgtatct 100  
 gagccccaga ctgccccgag ttctgtcgc aggtcgcgag gaaaggcccc 150  
 taggttggtg ctggtgcttg gcggcgaggg ctctctcccc gttgtontcc 200  
 ccgggcccag aggcacctcg gcttcagtca tgctgagcag agtatggaag 250  
 cacctgacta cgaagtgcata tccgtgcgag aacagctatt ccacgagagg 300  
 atccgcgagt gtattatata aacactctct tttgcaacac tgtacatcnt 350  
 ctgccacatc ttctcgacct gcttcaagaa gcctgctgag ttcaccacag 400  
 tggatgatga agatgccacc gtcaacaaga ttgcgctcga gctgtgcacc 450



tttacccctgg caattgccct ggggtgctgc ctgctcctgc ccttctccat 500  
 catcagcaat gaggtgctgc actccc 526

<210> 141  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 141  
 gactgtatct gagccccaga ctgc 24

<210> 142  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 142  
 tcagcaatga ggtgctgctc 20

<210> 143  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 143  
 tgaggaagat gagggacagg ttgg 24

<210> 144  
 <211> 50  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 144  
 tatggaagca cctgactacg aagtgcctatc cgtgcgagaa cagctattcc 50

<210> 145  
 <211> 685  
 <212> DNA  
 <213> Homo sapiens

<400> 145  
 gatgtgctcc ttggagctgg tgtgcagtgt cctgactgta agatcaagtc 50  
 caaacctggt ttggaattga ggaaacttct cttttgatct cagccottgg 100  
 tgggtccaggt cttcatgctg ctgtgggtga tattaactggt cctggctcct 150  
 gtcagtggac agtttgcaag gacaccacag cccattattt tctccagcc 200  
 tccatggacc acagtcttcc aaggagagag agtgacccto acttgcaagg 250

gatttgcgtt ctactcacca cagaaaacaa aatggtacca tcggtacctt 300  
 gggaagaaa tactaagaga aaccccagac aatatccttg aggttcagga 350  
 atctggagag tacagatgcc agggccaggg ctcccctctc agtagccctg 400  
 tgcacttgga tttttcttca gagatgggat ttcctcatgc tgcccaggct 450  
 aatgttgaa cctctgggctc aagtgatctg ctcacctagg cctctcaaa 500  
 cgctgggatt acagcttgc tgatctgca agctccactt tctgtgttg 550  
 aaggagactc tgtgttctg aggtgccggg caaaggcgga agtaacactg 600  
 aataatacta ttacaagaa tgataatgtc ctggcattcc ttaataaaag 650  
 aactgacttc caaaaaaaaa aaaaaaaaaa aaaaa 685

<210> 146  
 <211> 124  
 <212> PRT  
 <213> Homo sapiens

<400> 146  
 Met Leu Leu Trp Val Ile Leu Leu Val Leu Ala Pro Val Ser Gly  
 1 5 10 15  
 Gln Phe Ala Arg Thr Pro Arg Pro Ile Phe Leu Gln Pro Pro  
 20 25 30  
 Trp Thr Thr Val Phe Gln Gly Glu Arg Val Thr Leu Thr Cys Lys  
 35 40 45  
 Gly Phe Arg Phe Tyr Ser Pro Gln Lys Thr Lys Trp Tyr His Arg  
 50 55 60  
 Tyr Leu Gly Lys Glu Ile Leu Arg Glu Thr Pro Asp Asn Ile Leu  
 65 70 75  
 Glu Val Gln Glu Ser Gly Glu Tyr Arg Cys Gln Ala Gln Gly Ser  
 80 85 90  
 Pro Leu Ser Ser Pro Val His Leu Asp Phe Ser Ser Glu Met Gly  
 95 100 105  
 Phe Pro His Ala Ala Gln Ala Asn Val Glu Leu Leu Gly Ser Ser  
 110 115 120  
 Asp Leu Leu Thr

<210> 147  
 <211> 1621  
 <212> DNA  
 <213> Homo sapiens

<400> 147  
 cagaagaggg ggctagctag ctgtctctgc ggaccaggga gacccccg 50  
 ccccccggt gtgaggcggc ctcacagggc cgggtgggct ggcagagcca 100  
 cgcgcgcgcg gaggaggctg tgaggagtgt gtggaacagg acccgggaca 150

gaggaacat ggctccgag aacctgagca ccttttgct gttgctgcta 200  
 tacctcatcg gggcggtgat tgccggacga gatttctata agatcttggg 250  
 ggtgcctcga agtgccctcta taaaggatat taaaaggcco tataggaaac 300  
 tagccctgca gcttcatccc gaccggaacc ctgatgatcc acaagcccag 350  
 gagaaatcc aggatctggg tgctgcttat gaggttctgt cagatagtga 400  
 gaaacggaaa cagtacgata cttatggtga agaaggatta aaagatggtc 450  
 atcagagctc ccatggagac attttttcac acttctttgg ggattttggt 500  
 ttcatgtttg gaggaacccc tcgtcagcaa gacagaaata ttccaagagg 550  
 aagtgatatt attgtagatc tagaagtcac tttggaagaa gtatatgcag 600  
 gaaattttgt ggaagtagtt agaacaacac ctgtggcaag gcaggctcct 650  
 ggcaaacgga agtgcaattg tcggcaagag atgcggacca ccagctggg 700  
 ccctgggcgc ttccaaatga ccaggagggt ggtctgcgac gaatgcccta 750  
 atgtcaaac agtgaatgaa gaacgaacgc tggaagtaga aatagagcct 800  
 ggggtgagag acggcatgga gtaccctttt attggagaag gtgagcctca 850  
 cgtggtatgg gagcctggag atttacggtt ccgaatcaaa gttgtcaagc 900  
 acccaatatt tgaaaggaga ggagatgatt tgtacacaaa tgtgacaatc 950  
 tcattagtgt agtcaactgt tggctttgag atggatatta ctcaacttga 1000  
 tggtcacaag gtacatatct ccgggataa gatcacccag ccaggagcga 1050  
 agctatggaa gaaaggggaa gggctcccca actttgacaa caacaatctc 1100  
 aagggtctct tgataatcac ttttgatgtg gattttocaa aagaacagtt 1150  
 aacagaggaa gcgagagaag gtatcaaaac gctactgaaa caagggtcag 1200  
 tgcagaaggt atacaatgga ctgcaaggat attgagagtg aataaaattg 1250  
 gactttgttt aaaataagtg aataagcgat atttattatc tgcagggttt 1300  
 ttttgtgtgt gttttgtttt ttattttcaa tatgcaagtt aggccttaatt 1350  
 tttttatcta atgatcatca tgaaatgaat aagagggtct aagaatttgt 1400  
 ccatttgcac tcggaaaaga atgaccagca aaaggtttac taatacctct 1450  
 ccttttgggg atttaattgc tgggtgtgcc gcctgagttt caagaattaa 1500  
 agctgcaaga ggaactccag agcaaaagaa acacaatata gaggggttga 1550  
 gttgttagca atttcattca aaatgccaac tggagaagtc tgttttttaa 1600  
 tacattttgt tgttattttt a 1621

<210> 148  
 <211> 358  
 <212> PRT

<213> Homo sapiens

<400> 148

Met	Ala	Pro	Gln	Asn	Leu	Ser	Thr	Phe	Cys	Leu	Leu	Leu	Leu	Tyr
1				5					10					15
Leu	Ile	Gly	Ala	Val	Ile	Ala	Gly	Arg	Asp	Phe	Tyr	Lys	Ile	Leu
				20					25					30
Gly	Val	Pro	Arg	Ser	Ala	Ser	Ile	Lys	Asp	Ile	Lys	Lys	Ala	Tyr
				35					40					45
Arg	Lys	Leu	Ala	Leu	Gln	Leu	His	Pro	Asp	Arg	Asn	Pro	Asp	Asp
				50					55					60
Pro	Gln	Ala	Gln	Glu	Lys	Phe	Gln	Asp	Leu	Gly	Ala	Ala	Tyr	Glu
				65					70					75
Val	Leu	Ser	Asp	Ser	Glu	Lys	Arg	Lys	Gln	Tyr	Asp	Thr	Tyr	Gly
				80					85					90
Glu	Glu	Gly	Leu	Lys	Asp	Gly	His	Gln	Ser	Ser	His	Gly	Asp	Ile
				95					100					105
Phe	Ser	His	Phe	Phe	Gly	Asp	Phe	Gly	Phe	Met	Phe	Gly	Gly	Thr
				110					115					120
Pro	Arg	Gln	Gln	Asp	Arg	Asn	Ile	Pro	Arg	Gly	Ser	Asp	Ile	Ile
				125					130					135
Val	Asp	Leu	Glu	Val	Thr	Leu	Glu	Glu	Val	Tyr	Ala	Gly	Asn	Phe
				140					145					150
Val	Glu	Val	Val	Arg	Asn	Lys	Pro	Val	Ala	Arg	Gln	Ala	Pro	Gly
				155					160					165
Lys	Arg	Lys	Cys	Asn	Cys	Arg	Gln	Glu	Met	Arg	Thr	Thr	Gln	Leu
				170					175					180
Gly	Pro	Gly	Arg	Phe	Gln	Met	Thr	Gln	Glu	Val	Val	Cys	Asp	Glu
				185					190					195
Cys	Pro	Asn	Val	Lys	Leu	Val	Asn	Glu	Glu	Arg	Thr	Leu	Glu	Val
				200					205					210
Glu	Ile	Glu	Pro	Gly	Val	Arg	Asp	Gly	Met	Glu	Tyr	Pro	Phe	Ile
				215					220					225
Gly	Glu	Gly	Glu	Pro	His	Val	Asp	Gly	Glu	Pro	Gly	Asp	Leu	Arg
				230					235					240
Phe	Arg	Ile	Lys	Val	Val	Lys	His	Pro	Ile	Phe	Glu	Arg	Arg	Gly
				245					250					255
Asp	Asp	Leu	Tyr	Thr	Asn	Val	Thr	Ile	Ser	Leu	Val	Glu	Ser	Leu
				260					265					270
Val	Gly	Phe	Glu	Met	Asp	Ile	Thr	His	Leu	Asp	Gly	His	Lys	Val
				275					280					285
His	Ile	Ser	Arg	Asp	Lys	Ile	Thr	Arg	Pro	Gly	Ala	Lys	Leu	Trp
				290					295					300

Lys Lys Gly Glu Gly Leu Pro Asn Phe Asp Asn Asn Asn Ile Lys  
 305 310  
 Gly Ser Leu Ile Ile Thr Phe Asp Val Asp Phe Pro Lys Glu Gln  
 320 325 330  
 Leu Thr Glu Glu Ala Arg Glu Gly Ile Lys Gln Leu Leu Lys Gln  
 335 340 345  
 Gly Ser Val Gln Lys Val Tyr Asn Gly Leu Gln Gly Tyr  
 350 355

<210> 149  
 <211> 509  
 <212> DNA  
 <213> Homo sapiens  
 <220>  
 <221> unsure  
 <222> 34, 52, 134, 142, 155, 158, 196, 217, 228, 272, 347, 410, 445,  
 482  
 <223> unknown base

<400> 149  
 tgggaccagg gaaccccggtg ccccccgtg gagngcctaa caggccggtg 50  
 gntgcgaccg aagcggcggtg cggaggaggt tttgaggatt tttggaacag 100  
 gaccgcgaca gaggaacat ggttccgcag aacntgagca cnttttgcct 150  
 gttgntgnta tacttcacgc gggcggtgat tgcgcgacga gatttntata 200  
 agattttggg gtgcctngaa gtgcctnta taaaggatat taaaaaggcc 250  
 tataggaac tagccctgca gntttatccc gaccggaacc ctgatgatcc 300  
 acaagcccag gagaattcc aggatgtggg tgcgtcttat gaggttntgt 350  
 cagatagtga gaaacggaaa cagtacgata attatggtga agaaggatta 400  
 aaagatggtg atcagagctc ccatggagac attttttcac acttntttgg 450  
 ggattttggt ttcattgttg gaggaacccc tngtcagcaa gacagaaata 500  
 ttccaagag 509

<210> 150  
 <211> 1532  
 <212> DNA  
 <213> Homo sapiens

<400> 150  
 ggcacgaggc ggccgggcag tcgcgggatg cgcgcgggag ccacagcctg 50  
 aggcctcag gtctctgcag gtgtcgtgga ggaacctagc acctgccatc 100  
 ctcttcccca atttgccact tccagcagct ttagcccatg aggaggatgt 150  
 gaccgggact gagtcaggag cccctcggaa gcatggagac tgtggtgatt 200  
 gttgccatag gtgtgctggc caccatcttt ctggtctcgt ttgcagcctt 250  
 ggtgtcgtgt tgcaggcagc gctactgccg gccgcgagac ctgctgcagc 300

gctatgattc taagccatt gtggacctca ttggtgccaat ggagacccag 350  
 tctgagccct ctgagttaga actggacgat gtcgttatca ccaaccccca 400  
 cattgagccc attctggaga atgaagactg gatcgaagat gcctcgggtc 450  
 tcatgtccca ctgcattgcc atcttgaaga ttgtcacac tctgacagag 500  
 aagcttgttg ccatgacaat gggctctggg gccaagatga agacttcagc 550  
 cagtgtcagc gacatcattg ttgtggccaa gcggatcagc cccagggttg 600  
 atgatgttgt gaagtcgatg taccctccgt tggaccccaa actcctggac 650  
 gcacggacga ctgccttget cctgtctgtc agtcacctgg tgetggtgac 700  
 aaggaatgcc tgccatctga cgggaggcct ggactggatt gaccagtctc 750  
 tgtcggctgc tgaggagcat ttggaagtcc ttcgagaagc agccctagct 800  
 tctgagccag ataaaggcct cccaggccct gaaggcttcc tgcaggagca 850  
 gtctgcaatt tagtgcctac aggccagcag ctagccatga aggccctgac 900  
 cgccatccct ggatggtcca gcttagcctt ctacttttcc ctatagagtt 950  
 agttgttctc cacggctgga gagttcagct gtgtgtgcat agtaaaagcag 1000  
 gagatccccc tcagtttatg cctcttttgc agttgcaaac tgtggctggt 1050  
 gagtggcagt ctaatactac agttagggga gatgccatto actctctgca 1100  
 agaggagtat tgaaaaactg ttgactgtca gctttatcta gctcacctag 1150  
 tgttttcaag aaaattgagc caccgtctaa gaaatcaaga ggtttcacat 1200  
 taaaattaga atttctggcc tctctcgatc ggtcagaatg tgtggcaatt 1250  
 ctgatctgca ttttcagaag aggacaatca attgaaacta agtaggggtt 1300  
 tcttcttttg gcaagacttg tactctctca cctggcctgt ttcatttatt 1350  
 tgtattatct gcttgggtccc tgaggcgtct ggtctctccc tctcccttgc 1400  
 aggtttgggt ttgaagctga ggaactacaa agttgatgat tcttttttta 1450  
 tctttatgcc tgcaatttta ctagctacc actagggtga tagtaaaatt 1500  
 atacttatgt ttccctcaaa aaaaaaaaaa aa 1532

<210> 151  
 <211> 226  
 <212> PRT  
 <213> Homo sapiens

<400> 151  
 Met Glu Thr Val Val Ile Val Ala Ile Gly Val Leu Ala Thr Ile  
 1 5 10 15  
 Phe Leu Ala Ser Phe Ala Ala Leu Val Leu Val Cys Arg Gln Arg  
 20 25 30  
 Tyr Cys Arg Pro Arg Asp Leu Leu Gln Arg Tyr Asp Ser Lys Pro

	35	40	45
Ile Val Asp Leu	Ile Gly Ala Met	Glu Thr Gln Ser	Glu Pro Ser
	50	55	60
Glu Leu Glu Leu	Asp Asp Val Val	Ile Thr Asn Pro	His Ile Glu
	65	70	75
Ala Ile Leu Glu	Asn Glu Asp Trp	Ile Glu Asp Ala	Ser Gly Leu
	80	85	90
Met Ser His Cys	Ile Ala Ile Leu	Lys Ile Cys His	Thr Leu Thr
	95	100	105
Glu Lys Leu Val	Ala Met Thr Met	Gly Ser Gly Ala	Lys Met Lys
	110	115	120
Thr Ser Ala Ser	Val Ser Asp Ile	Ile Val Val Ala	Lys Arg Ile
	125	130	135
Ser Pro Arg Val	Asp Asp Val Val	Lys Ser Met Tyr	Pro Pro Leu
	140	145	150
Asp Pro Lys Leu	Leu Asp Ala Arg	Thr Thr Ala Leu	Leu Leu Ser
	155	160	165
Val Ser His Leu	Val Leu Val Thr	Arg Asn Ala Cys	His Leu Thr
	170	175	180
Gly Gly Leu Asp	Trp Ile Asp Gln	Ser Leu Ser Ala	Ala Glu Glu
	185	190	195
His Leu Glu Val	Leu Arg Glu Ala	Ala Leu Ala Ser	Glu Pro Asp
	200	205	210
Lys Gly Leu Pro	Gly Pro Glu Gly	Phe Leu Gln Glu	Gln Ser Ala
	215	220	225

Ile

<210> 152  
 <211> 1027  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 1017, 1020  
 <223> unknown base

<400> 152  
 gtttcatttc tcccgactca gtttcccacc ctgggctttc cgagggtgctt 50  
 tgcgcgtgt cccaccact gcagccatga tctctttaac ggacacgag 100  
 aaaattggaa tgggattaac aggatttgga gtgttttttc tgttctttgg 150  
 aatgattctc ttttttgaca aagcactact ggctatttga aatgttttat 200  
 ttgtagccgg ctgtgctttt gtaattgggt tagaaagaac attcagattc 250  
 ttcttccaaa aacataaaat gaaagctaca gggttttttc tgggtggtgt 300

attttagtagtc cttattgggtt ggcctttgat aggcattgac ttcgaaattt 350  
 atgggattttt tctcttggtc aggggttctt ttcctgtcgt tgttggtttt 400  
 attagaagag tgccagtcct tggatccctc ctaaatattac ctggaattag 450  
 atcatttgta gataaagttg gagaagcaa caatatggta taacaacaag 500  
 tgaatttgaa gactcattta aaattattgt ttatttataa agtcatttga 550  
 agaattattca gcacaaaatt aaattacatg aaatagcttg taatgttctt 600  
 tacaggaggt taaaacgtat agcctacaaa gtaccagcag caaattagca 650  
 aagaagcagt gaaaacaggg ttctactcaa gtgaactaag aagaagtcag 700  
 caagcaaact gagagagggt aaatccatgt taatgatgct taagaaactc 750  
 ttgaaggcta tttgtgttgt ttttccacaa tgtgcgaaac tcagccatcc 800  
 ttagagaact gtggtgcctg tttcttttct ttttattttg aaggctcagg 850  
 agcatccata ggcatttgct ttttgaagt gtccactgca atggcaaaaa 900  
 tatttccagt tgcactgtat ctctggaagt gatgcatgaa ttcgatttga 950  
 ttgtgtcatt ttaaagtatt aaaaccaagg aaaccccaat ttgatgtat 1000  
 ggattacttt tttttngcn cagggcc 1027

<210> 153  
 <211> 138  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> N-myristoylation Sites  
 <222> 11-16, 51-56 and 116-121  
 <223> N-myristoylation Sites.

<220>  
 <221> Transmembrane domains  
 <222> 12-30, 33-52, 69-89 and 93-109  
 <223> Transmembrane domains

<220>  
 <221> Aminoacyl-transfer RNA Synthetases.  
 <222> 49-59  
 <223> Aminoacyl-transfer RNA synthetases class-II protein.

<400> 153  
 Met Ile Ser Leu Thr Asp Thr Gln Lys Ile Gly Met Gly Leu Thr  
 1 5 10 15  
 Gly Phe Gly Val Phe Phe Leu Phe Phe Gly Met Ile Leu Phe Phe  
 20 25 30  
 Asp Lys Ala Leu Leu Ala Ile Gly Asn Val Leu Phe Val Ala Gly  
 35 40 45  
 Leu Ala Phe Val Ile Gly Leu Glu Arg Thr Phe Arg Phe Phe Phe  
 50 55 60



Gln	Lys	His	Lys	Met	Lys	Ala	Thr	Gly	Phe	Phe	Leu	Gly	Gly	Val
				65					70					75
Phe	Val	Val	Leu	Ile	Gly	Trp	Pro	Leu	Ile	Gly	Met	Ile	Phe	Glu
				80					85					90
Ile	Tyr	Gly	Phe	Phe	Leu	Leu	Phe	Arg	Gly	Phe	Phe	Pro	Val	Val
				95					100					105
Val	Gly	Phe	Ile	Arg	Arg	Val	Pro	Val	Leu	Gly	Ser	Leu	Leu	Asn
				110					115					120
Leu	Pro	Gly	Ile	Arg	Ser	Phe	Val	Asp	Lys	Val	Gly	Glu	Ser	Asn
				125					130					135

Asn Met Val

<210> 154  
 <211> 405  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 66  
 <223> unknown base

<400> 154  
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 actcagcttc ccacntggg ctttcgagg tgctttcgcc gctgtcccca 100  
 ccactgcagc catgatctcc ttaacggaca cgcagaaaat tggaaatgga 150  
 ttaaccggat ttggagtgtt tttcctgttc tttggaatga ttctcttttt 200  
 tgacaaagca ctactggcta ttggaatgt tttatttgta gccggcttgg 250  
 cttttgtaat tggtttagaa agaacattca gattcttctt caaaaaacat 300  
 aaaatgaaag ctacaggttt tttctgggt ggtgtatttg tagtcttat 350  
 tgggtggcct ttgataggca tgatcttga aatttatgga tttttctct 400  
 tgttc 405

<210> 155  
 <211> 1781  
 <212> DNA  
 <213> Homo sapiens

<400> 155  
 ggcacgaggc tgaaccagc cggtccatc tcagcttctg gtttctaagt 50  
 ccatgtgcc aaggctgcc ggaaggagac gccttctga gtctctgac 100  
 tttcttctt ctggaatct ttgactgtgg gtagttattt atttctgaat 150  
 aagagcgtcc acgcatcatg gacctcgcg gactgctgaa gtctcagttc 200  
 ctgtgccacc tggcttctg ctacgtcttt attgctcag ggctaatac 250

caacaccatt cagctcttca ctctcctcct ctggccatt aacaagcagc 300  
 tcttcgga gatcaactgc agactgtcct attgcatctc aagccagctg 350  
 gtgatgtgc tggagtgtg gtcgggcacg gaatgcacca tcttcacga 400  
 ccgcgcgcc tacctcaagt atgggaagga aaatgccatc gtggttctca 450  
 accacaagtt tgaaattgac tttctgtgtg gctggagcct gtcgacgcg 500  
 tttgggtgt tagggggctc caaggtcctg gccagaagag agctggccta 550  
 tgtccaatt atcggtgga tgtgttactt caccgagatg gtcttctgtt 600  
 cgcgcaagt ggagcaggat cgcaagacgg ttgccaccag tttgcagcac 650  
 ctccgggact acccgagaa gtatttttct ctgattcaact gtgagggaac 700  
 acggttcacg gagaagaagc atgagatcag catgcagggt gcccgggcca 750  
 aggggtctgc tcgcctcaag catcacctgt tgccacgaac caagggtctc 800  
 gccatcaccg tgaggagctt gagaaatgta gtttcagctg tatatgactg 850  
 tactctaat ttcagaaata atgaaaatcc aacactgctg ggagtccata 900  
 acggaagaa ataccatgca gatttgtatg ttagggagat ccactggaa 950  
 gacatocctg aagacatga cagtgctcg gcctggctcg acaagctcta 1000  
 ccaggagaag gatgccttcc agggaggagta ctacaggacg ggcaccttcc 1050  
 cagagacgcc catggtgccc cccggcgccg cctggaccct cgtgaactgg 1100  
 ctgttttggg cctcgctggt gctctaccct ttcttccagt tctggtcag 1150  
 catgatcagg agcgggtctt cctgacgct ggccagcttc atcctcgtct 1200  
 tctttgtggc ctccgtggga gttcgatgga tgattggtg gacgaaaatt 1250  
 gacaagggtc ctgcctacgg caactctgac agcaagcaga aactgaatga 1300  
 ctgactcagg gaggtgtcac catccgaagg gaaccttggg gaactggtg 1350  
 cctctgcata tctccttag tgggacacgg tgacaaagcg tgggtgagcc 1400  
 cctgtcgggc acggcggaag tcacgacctc tccagccagg gactctggtc 1450  
 tcaaggccgg atggggagga agatgttttg taatcttttt tccccatgt 1500  
 gcttttagtg gctttggtt tctttttgtg cgagtgtgtg tgagaatggc 1550  
 tgtgtgtgga gtgtgaactt tgtctgtgta tcatagaag ggtattttag 1600  
 gctgcagggg agggcagggc tggggaccca aggggacaag tcccccttc 1650  
 atccttttgt gctgagtttt ctgtaaccct tggttgccag agataaagtg 1700  
 aaaaagtctt taggtgagat gactaaatta tgctccaag aaaaaaaaaa 1750  
 taaagtgtctt tctgggtca aaaaaaaaaa a 1781

<210> 156

<211> 378  
 <212> PRT  
 <213> Homo sapiens

<400> 156

Met	Asp	Leu	Ala	Gly	Leu	Leu	Lys	Ser	Gln	Phe	Leu	Cys	His	Leu	1	5	10	15
Val	Phe	Cys	Tyr	Val	Phe	Ile	Ala	Ser	Gly	Leu	Ile	Ile	Asn	Thr	20	25	30	35
Ile	Gln	Leu	Phe	Thr	Leu	Leu	Leu	Trp	Pro	Ile	Asn	Lys	Gln	Leu	40	45	50	55
Phe	Arg	Lys	Ile	Asn	Cys	Arg	Leu	Ser	Tyr	Cys	Ile	Ser	Ser	Gln	60	65	70	75
Leu	Val	Met	Leu	Leu	Glu	Trp	Trp	Ser	Gly	Thr	Glu	Cys	Thr	Ile	80	85	90	95
Phe	Thr	Asp	Pro	Arg	Ala	Tyr	Leu	Lys	Tyr	Gly	Lys	Glu	Asn	Ala	100	105	110	115
Ile	Val	Val	Leu	Asn	His	Lys	Phe	Glu	Ile	Asp	Phe	Leu	Cys	Gly	120	125	130	135
Trp	Ser	Leu	Ser	Glu	Arg	Phe	Gly	Leu	Leu	Gly	Gly	Ser	Lys	Val	140	145	150	155
Leu	Ala	Lys	Lys	Glu	Leu	Ala	Tyr	Val	Pro	Ile	Ile	Gly	Trp	Met	160	165	170	175
Trp	Tyr	Phe	Thr	Glu	Met	Val	Phe	Cys	Ser	Arg	Lys	Trp	Glu	Gln	180	185	190	195
Asp	Arg	Lys	Thr	Val	Ala	Thr	Ser	Leu	Gln	His	Leu	Arg	Asp	Tyr	200	205	210	215
Pro	Glu	Lys	Tyr	Phe	Phe	Leu	Ile	His	Cys	Glu	Gly	Thr	Arg	Phe	220	225	230	235
Thr	Glu	Lys	Lys	His	Glu	Ile	Ser	Met	Gln	Val	Ala	Arg	Ala	Lys	240	245	250	255
Gly	Leu	Pro	Arg	Leu	Lys	His	His	Leu	Leu	Pro	Arg	Thr	Lys	Gly	260	265	270	275
Phe	Ala	Ile	Thr	Val	Arg	Ser	Leu	Arg	Asn	Val	Val	Ser	Ala	Val	280	285	290	295
Tyr	Asp	Cys	Thr	Leu	Asn	Phe	Arg	Asn	Asn	Glu	Asn	Pro	Thr	Leu	300	305	310	315
Leu	Gly	Val	Leu	Asn	Gly	Lys	Lys	Tyr	His	Ala	Asp	Leu	Tyr	Val	320	325	330	335
Arg	Arg	Ile	Pro	Leu	Glu	Asp	Ile	Pro	Glu	Asp	Asp	Asp	Glu	Cys	340	345	350	355
Ser	Ala	Trp	Leu	His	Lys	Leu	Tyr	Gln	Glu	Lys	Asp	Ala	Phe	Gln	360	365	370	375
Glu	Glu	Tyr	Tyr	Arg	Thr	Gly	Thr	Phe	Pro	Glu	Thr	Pro	Met	Val	380	385	390	395

290	295	300
Pro Pro Arg Arg	Pro Trp Thr Leu Val Asn Trp Leu Phe Trp Ala	
305	310	315
Ser Leu Val Leu Tyr Pro Phe Phe Gln Phe Leu Val Ser Met Ile		
320	325	330
Arg Ser Gly Ser Ser Leu Thr Leu Ala Ser Phe Ile Leu Val Phe		
335	340	345
Phe Val Ala Ser Val Gly Val Arg Trp Met Ile Gly Val Thr Glu		
350	355	360
Ile Asp Lys Gly Ser Ala Tyr Gly Asn Ser Asp Ser Lys Gln Lys		
365	370	375
Leu Asn Asp		

<210> 157  
 <211> 1849  
 <212> DNA  
 <213> Homo sapiens

<400> 157  
 ctgaggcgcc ggtagcatgg agggggagag tacgtcggcg gtgctctcgg 50  
 gcttttgct cgcgccactc gctttccagc acctcaacac ggactcggac 100  
 acggaaggtt ttcttcttgg ggaagtaaaa ggtgaagcca agaacagcat 150  
 tactgattcc caaatggatg atgttgaaat tgtttataca attgacattc 200  
 agaaatatat tccatgctat cagcttttta gcttttataa ttcttcaggc 250  
 gaagtaaatg agcaagcact gaagaaaata ttatcaaagt tcaaaaagaa 300  
 tgtggtagggt tggtaacaat tccgtcgtca ttcagatcag atcatgacgt 350  
 ttagagagag gctgcttcac aaaaacttgc aggagcattt ttcaaaccac 400  
 gacctgtgtt ttctgctatt aacaccaagt ataataacag aaagctgctc 450  
 tactcatoga ctggaacatt ctttatataa acctcaaaaa ggacttttcc 500  
 acagggtacc tttagtggtt gccaatctgg gcattgtctga acaactgggt 550  
 tataaaactg tatcaggttc ctgtatgtcc actggtttta gccgagcagt 600  
 acaaacacac agctctaaat tttttgaaga agatggatcc ttaaaggagg 650  
 tacataagat aaatgaaatg tatgcttcat tacaagagga attaaagagt 700  
 atatgcaaaa aagtgaaga cagtgaacaa gcagtagata aactagtaaa 750  
 ggatgtaaac agattaaaac gagaattga gaaaaggaga ggagcacaga 800  
 ttcaggcagc aagagagaag aacatccaaa aagaccctca ggagaacatt 850  
 tttctttgtc aggcattacg gacctttttt ccaaatctcg aatttcttca 900  
 ttcatgtgtt atgtctttaa aaaatagaca tgtttctaaa agtagctgta 950

actacaacca coactctcgat gtagtagaca atctgacctt aatggtagaa 1000  
 cacactgaca ttccctgaagc tagtccagct agtacaccac aaatcattaa 1050  
 gcataaagcc ttagacttag atgacagatg gcaattcaag agatctcggt 1100  
 tgttagatagc acaagacaaa cgatctaaag caaatactgg tagtagtaac 1150  
 caagataaag catccaaaaa gagcagccca gaaacagatg aagaaattga 1200  
 aaagatgaag ggttttggtg aatattcacg gtctcctaca ttttgatcct 1250  
 ttttaacctta caaggagatt tttttatttg gctgatgggt aagccaaac 1300  
 atttctattg tttttactat gttgagctac ttgcagtaag ttcatttggt 1350  
 tttactatgt tcacctgttt gcagtaatac acagataaot cttagtgcac 1400  
 ttacttcaca aagtactttt tcaaacaatca gatgctttta tttccaaacc 1450  
 tttttttcac ctttactaa gttgttgagg ggaaggctta cacagacaca 1500  
 ttcttttagaa ttgaaaaagt gagaccaggc acagtggcto acacctgtaa 1550  
 tcccagcact tagggaagac aagtcaggag gattgattga agctaggagt 1600  
 tagagaccag cctgggcaac gtattgagac catgtctatt aaaaaataaa 1650  
 atggaaaagc aagaatagcc ttattttcaa aatattgaaa gaaatttata 1700  
 tgaaaattta tctgagtcac taaaattctc cttaagtcat acttttttag 1750  
 aagtacatta tggctagagt tgccagataa aatgctggat atcatgcaat 1800  
 aaatttgcac aacatcatct aaaatttaaa aaaaaaaaaa aaaaaaaaaa 1849

<210> 158

<211> 409

<212> PRT

<213> Homo sapiens

<400> 158

Met	Glu	Gly	Glu	Ser	Thr	Ser	Ala	Val	Leu	Ser	Gly	Phe	Val	Leu
1				5					10					15
Gly	Ala	Leu	Ala	Phe	Gln	His	Leu	Asn	Thr	Asp	Ser	Asp	Thr	Glu
				20					25					30
Gly	Phe	Leu	Leu	Gly	Glu	Val	Lys	Gly	Glu	Ala	Lys	Asn	Ser	Ile
				35					40					45
Thr	Asp	Ser	Gln	Met	Asp	Asp	Val	Glu	Val	Val	Tyr	Thr	Ile	Asp
				50					55					60
Ile	Gln	Lys	Tyr	Ile	Pro	Cys	Tyr	Gln	Leu	Phe	Ser	Phe	Tyr	Asn
				65					70					75
Ser	Ser	Gly	Glu	Val	Asn	Glu	Gln	Ala	Leu	Lys	Lys	Ile	Leu	Ser
				80					85					90
Asn	Val	Lys	Lys	Asn	Val	Val	Gly	Trp	Tyr	Lys	Phe	Arg	Arg	His
				95					100					105

Ser	Asp	Gln	Ile	Met	Thr	Phe	Arg	Glu	Arg	Leu	Leu	His	Lys	Asn	110	115	120
Leu	Gln	Glu	His	Phe	Ser	Asn	Gln	Asp	Leu	Val	Phe	Leu	Leu	Leu	125	130	135
Thr	Pro	Ser	Ile	Ile	Thr	Glu	Ser	Cys	Ser	Thr	His	Arg	Leu	Glu	140	145	150
His	Ser	Leu	Tyr	Lys	Pro	Gln	Lys	Gly	Leu	Phe	His	Arg	Val	Pro	155	160	165
Leu	Val	Val	Ala	Asn	Leu	Gly	Met	Ser	Glu	Gln	Leu	Gly	Tyr	Lys	170	175	180
Thr	Val	Ser	Gly	Ser	Cys	Met	Ser	Thr	Gly	Phe	Ser	Arg	Ala	Val	185	190	195
Gln	Thr	His	Ser	Ser	Lys	Phe	Phe	Glu	Glu	Asp	Gly	Ser	Leu	Lys	200	205	210
Glu	Val	His	Lys	Ile	Asn	Glu	Met	Tyr	Ala	Ser	Leu	Gln	Glu	Glu	215	220	225
Leu	Lys	Ser	Ile	Cys	Lys	Lys	Val	Glu	Asp	Ser	Glu	Gln	Ala	Val	230	235	240
Asp	Lys	Leu	Val	Lys	Asp	Val	Asn	Arg	Leu	Lys	Arg	Glu	Ile	Glu	245	250	255
Lys	Arg	Arg	Gly	Ala	Gln	Ile	Gln	Ala	Ala	Arg	Glu	Lys	Asn	Ile	260	265	270
Gln	Lys	Asp	Pro	Gln	Glu	Asn	Ile	Phe	Leu	Cys	Gln	Ala	Leu	Arg	275	280	285
Thr	Phe	Phe	Pro	Asn	Ser	Glu	Phe	Leu	His	Ser	Cys	Val	Met	Ser	290	295	300
Leu	Lys	Asn	Arg	His	Val	Ser	Lys	Ser	Ser	Cys	Asn	Tyr	Asn	His	305	310	315
His	Leu	Asp	Val	Val	Asp	Asn	Leu	Thr	Leu	Met	Val	Glu	His	Thr	320	325	330
Asp	Ile	Pro	Glu	Ala	Ser	Pro	Ala	Ser	Thr	Pro	Gln	Ile	Ile	Lys	335	340	345
His	Lys	Ala	Leu	Asp	Leu	Asp	Asp	Arg	Trp	Gln	Phe	Lys	Arg	Ser	350	355	360
Arg	Leu	Leu	Asp	Thr	Gln	Asp	Lys	Arg	Ser	Lys	Ala	Asn	Thr	Gly	365	370	375
Ser	Ser	Asn	Gln	Asp	Lys	Ala	Ser	Lys	Met	Ser	Ser	Pro	Glu	Thr	380	385	390
Asp	Glu	Glu	Ile	Glu	Lys	Met	Lys	Gly	Phe	Gly	Glu	Tyr	Ser	Arg	395	400	405
Ser	Pro	Thr	Phe														

<210> 159  
 <211> 2651  
 <212> DNA  
 <213> Homo sapiens

<400> 159  
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 acgagcggac cagcgcaggc cagcccaagc agcgcgcagc gaacgcccgc 100  
 cgcgcgccac accctctgcg gtcccgcggc cgcctgccac ccttccctcc 150  
 ttcccgcgt cccgcctcgc ccggccagtc agcttgccgc gttcgtgcc 200  
 ccgcgaaacc ccgaggtcac cagcccgcgc ctctgcttcc ctgggcgcgc 250  
 cgcgcctcc acgcccctct tctcccctgg ccgggcgcct ggacacgggg 300  
 accgttgctc gacgcgaggc ccagctctac ttttcgcccc cgtctctctc 350  
 cgcctgctgc cctcttccac caactccaac tcttctctcc tccagctcca 400  
 ctgcgtatgc ccgactccg ccagccctgc gcccgctgcc gtacgcgccg 450  
 ttcccgctgc gtcccaaagg tgggaacgcg tccgccccgc ccgcacccat 500  
 ggacaggttc ggcttgccgc cgttctctgc caccctggca gtgctcagcg 550  
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 cgtcttttac gtgccaaagg cttcaacaag aacgatgccc cctccacga 650  
 gatcaacggt gatcatttga agatctgtcc ccagggttct acctgtgct 700  
 ctcaagagat ggaggagaag tacagcctgc aaagtaaaga tgatttcaaa 750  
 agtgtggtca gcgaacagtg caatcatttg caagctgtct ttgcttcacg 800  
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 aatccctgaa tgatatgttt gtgaagacat atggccattt atacatgcaa 900  
 aattctgagc tatttaaga tctcttcgta gagtgaac gttactactg 950  
 ggtgggaat gtgaacctgg aagaaatgct aaatgacttc tgggctgcgc 1000  
 tcctggagcg gatgttccgc ctggtgaact ccagtagcca cttacagat 1050  
 gagtatctgg aatgtgtgag caagtatacg gagcagctga agcccttcgc 1100  
 agatgtccct cgcaaatga agctccaggt tactcgtgct tttgtagcag 1150  
 cccgtacttt cgctcaaggc ttacgggttg cgggagatgt cgtgagcaag 1200  
 gtctccgttg taaacccac agcccaggtg acccatgccc tgttgaagat 1250  
 gatctactgc tccactgcc ggggtctcgt gactgtgaag ccatgttaca 1300  
 actactgctc aaacatcatg agaggctgtt tggccaacca aggggatctc 1350  
 gattttgaat ggaacaattt catagatgct atgctgatgg tggcagagag 1400  
 gctagagggt cctttcaaca ttgaatcgtg catggatccc atcgatgtga 1450

agatttctga tgctattatg aacatgcagg ataatagtgt tcaagtgctc 1500  
 cagaagggtt tccaggggatg tggacccccc aagccctccc cagctgggacg 1550  
 aatttctcgt tccatctctg aaagtgcctt cagtgtctcg ttccagaccac 1600  
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 ctggttactg atgtcaagga gaaactgaaa caggccaaga aattctggtc 1700  
 ctcccttcgg agcaacgttt gcaacgatga gaggtatggc gcaggaaacg 1750  
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 gcagtgacag gaaatggatt agocaaaccg ggcaacaacc cagaggtcca 1850  
 ggttgacacc agcaaaaccg acatactgat ccttcgtcaa atcatggctc 1900  
 ttcgagtgat gaccagcaag atgaagaatg catacaatgg gaacgacgtg 1950  
 gactctcttg atatcagtga tgaaagtatg ggagaaggaa gtggaagtg 2000  
 ctgtgagtat cagcagtgcc cttcagagtt tgactacaat gccactgacc 2050  
 atgtctggaa gagtgcgaat gagaaagccg acagtgtctg tgcctgctc 2100  
 ggggcacagg cctacctcct cactgtcttc tgcatcttgt tctcggttat 2150  
 gcagagagag tggagataat tctcaaactc tgagaaaaag tgttcatcaa 2200  
 aaagttaaaa ggcaccagtt atcacttttc taccatccta gtgactttgc 2250  
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 tttagaagt gctgactttg ttttctcatt cagttttggg aggaaaaagg 2350  
 actgtgcatt gagttgggtc ctgctcccc aaacatgtt aaacgtggct 2400  
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 tttcaactg tgatctcgcc ttgtttctta caagcaaacc agggtcctt 2550  
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 agcaggtttt atttatcatg ttatcttatt aaaaagaaaa gcccaaaaa 2650  
 c 2651

<210> 160

<211> 556

<212> PRT

<213> Homo sapiens

<400> 160

Met	Ala	Arg	Phe	Gly	Leu	Pro	Ala	Leu	Leu	Cys	Thr	Leu	Ala	Val
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Leu	Ser	Ala	Ala	Leu	Leu	Ala	Ala	Glu	Leu	Lys	Ser	Lys	Ser	Cys
				20					25					30
Ser	Glu	Val	Arg	Arg	Leu	Tyr	Val	Ser	Lys	Gly	Phe	Asn	Lys	Asn



	35		40		45
Asp Ala Pro Leu	His Glu Ile Asn Gly	Asp His Leu Lys Ile Cys			
	50	55	60		
Pro Gln Gly Ser	Thr Cys Cys Ser Gln	Glu Met Glu Glu Lys Tyr			
	65	70	75		
Ser Leu Gln Ser	Lys Asp Asp Phe Lys	Ser Val Val Ser Glu Gln			
	80	85	90		
Cys Asn His Leu	Gln Ala Val Phe Ala	Ser Arg Tyr Lys Lys Phe			
	95	100	105		
Asp Glu Phe Phe	Lys Glu Leu Leu Glu	Asn Ala Glu Lys Ser Leu			
	110	115	120		
Asn Asp Met Phe	Val Lys Thr Tyr Gly	His Leu Tyr Met Gln Asn			
	125	130	135		
Ser Glu Leu Phe	Lys Asp Leu Phe Val	Glu Leu Lys Arg Tyr Tyr			
	140	145	150		
Val Val Gly Asn	Val Asn Leu Glu Glu	Met Leu Asn Asp Phe Trp			
	155	160	165		
Ala Arg Leu Leu	Glu Arg Met Phe Arg	Leu Val Asn Ser Gln Tyr			
	170	175	180		
His Phe Thr Asp	Glu Tyr Leu Glu Cys	Val Ser Lys Tyr Thr Glu			
	185	190	195		
Gln Leu Lys Pro	Phe Gly Asp Val Pro	Arg Lys Leu Lys Leu Gln			
	200	205	210		
Val Thr Arg Ala	Phe Val Ala Ala Arg	Thr Phe Ala Gln Gly Leu			
	215	220	225		
Ala Val Ala Gly	Asp Val Val Ser Lys	Val Ser Val Val Asn Pro			
	230	235	240		
Thr Ala Gln Cys	Thr His Ala Leu Leu	Lys Met Ile Tyr Cys Ser			
	245	250	255		
His Cys Arg Gly	Leu Val Thr Val Lys	Pro Cys Tyr Asn Tyr Cys			
	260	265	270		
Ser Asn Ile Met	Arg Gly Cys Leu Ala	Asn Gln Gly Asp Leu Asp			
	275	280	285		
Phe Glu Trp Asn	Asn Phe Ile Asp Ala	Met Leu Met Val Ala Glu			
	290	295	300		
Arg Leu Glu Gly	Pro Phe Asn Ile Glu	Ser Val Met Asp Pro Ile			
	305	310	315		
Asp Val Lys Ile	Ser Asp Ala Ile Met	Asn Met Gln Asp Asn Ser			
	320	325	330		
Val Gln Val Ser	Gln Lys Val Phe Gln	Gly Cys Gly Pro Pro Lys			
	335	340	345		
Pro Leu Pro Ala	Gly Arg Ile Ser Arg	Ser Ile Ser Glu Ser Ala			

350	355	360
Phe Ser Ala Arg	Phe Arg Pro His His	Pro Glu Glu Arg Pro Thr
365	370	375
Thr Ala Ala Gly	Thr Ser Leu Asp Arg	Leu Val Thr Asp Val Lys
380	385	390
Glu Lys Leu Lys	Gln Ala Lys Lys Phe	Trp Ser Ser Leu Pro Ser
395	400	405
Asn Val Cys Asn	Asp Glu Arg Met Ala	Ala Gly Asn Gly Asn Glu
410	415	420
Asp Asp Cys Trp	Asn Gly Lys Gly Lys	Ser Arg Tyr Leu Phe Ala
425	430	435
Val Thr Gly Asn	Gly Leu Ala Asn Gln	Gly Asn Asn Pro Glu Val
440	445	450
Gln Val Asp Thr	Ser Lys Pro Asp Ile	Leu Ile Leu Arg Gln Ile
455	460	465
Met Ala Leu Arg	Val Met Thr Ser Lys	Met Lys Asn Ala Tyr Asn
470	475	480
Gly Asn Asp Val	Asp Phe Phe Asp Ile	Ser Asp Glu Ser Ser Gly
485	490	495
Glu Gly Ser Gly	Ser Gly Cys Glu Tyr	Gln Gln Cys Pro Ser Glu
500	505	510
Phe Asp Tyr Asn	Ala Thr Asp His Ala	Gly Lys Ser Ala Asn Glu
515	520	525
Lys Ala Asp Ser	Ala Gly Val Arg Pro	Gly Ala Gln Ala Tyr Leu
530	535	540
Leu Thr Val Phe	Cys Ile Leu Phe Leu	Val Met Gln Arg Glu Trp
545	550	555

Arg

<210> 161  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 161  
 ctccgtggta aacccacag ccc 23

<210> 162  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 162  
 tcacatcgat gggatccatg accg 24

<210> 163  
 <211> 50  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 163  
 ggtctcgtga ctgtgaagcc atgttacaac tactgctcaa acatcatgag 50

<210> 164  
 <211> 870  
 <212> DNA  
 <213> Homo sapiens

<400> 164  
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 gctgagtagt ctgacctgag tcacccccag ggatcaggag cctccagcag 100  
 ggaaccttcc attatattct tcaagcaact tacagctgca ccgacagtgt 150  
 cgatgaaagt tctaattctt tccctcctcc tgttgctgccc actaatgtgt 200  
 atgtccatgg tctctagcag cctgaatcca ggggtcgcca gaggccacag 250  
 ggaccgaggg caggcttcta ggagatggct ccaggaaggc ggccaagaat 300  
 gtgagtgcaa agattgggtc ctgagagccc cgagaagaaa attcatgaca 350  
 gtgtctgggc tgccaaagaa gcagtgcccc tgtgatcatt tcaagggcaa 400  
 tgtgaagaaa acaagacacc aaaggcacca cagaaagcca aacaagcatt 450  
 ccagagcctg ccagcaattt ctcaacaat gtcagctaag aagctttgct 500  
 ctgcctttgt aggagctctg agcgcccaact ctccaatta aacatttcca 550  
 gccaaagaag cagtgagcac acctaccaga cactcttctt ctcccacctc 600  
 actctcccac tgtaccaccc cctaaatcat tccagtgttc tcaaaaagca 650  
 tgtttttcaa gatcattttg tttgttgctc tctctagtgt cttcttctct 700  
 cgtcagcttt agcctgtgcc ctccccttac ccaggcttag gcttaattac 750  
 ctgaaagatt ccaggaaact gtagcttctt agctagtgtc atttaacott 800  
 aaatgcaatc aggaaagttag caaacagaag tcaataaata tttttaaatg 850  
 tcaaaaaaaaa aaaaaaaaaa 870

<210> 165  
 <211> 119  
 <212> PRT  
 <213> Homo sapiens

<400> 165  
 Met Lys Val Leu Ile Ser Ser Leu Leu Leu Leu Leu Pro Leu Met

1	5	10	15
Leu Met Ser Met	Val Ser Ser Ser	Leu Asn Pro Gly Val Ala	Arg
	20	25	30
Gly His Arg Asp	Arg Gly Gln Ala Ser Arg	Arg Trp Leu Gln Glu	
	35	40	45
Gly Gly Gln Glu	Cys Glu Cys Lys Asp Trp	Phe Leu Arg Ala Pro	
	50	55	60
Arg Arg Lys Phe	Met Thr Val Ser Gly Leu	Pro Lys Lys Gln Cys	
	65	70	75
Pro Cys Asp His	Phe Lys Gly Asn Val Lys Lys Thr Arg His	Gln	
	80	85	90
Arg His His Arg	Lys Pro Asn Lys His Ser Arg Ala Cys Gln	Cys	
	95	100	105
Phe Leu Lys Gln	Cys Gln Leu Arg Ser Phe Ala Leu Pro Leu		
	110	115	

<210> 166  
 <211> 551  
 <212> DNA  
 <213> Homo sapiens

<400> 166  
 aatggctgtc ttagtacttc gcctgacagt tgctcctggga ctgcttgtct 50  
 tattcctgac ctgctatgca gacgacaac cagacaagcc agacgacaga 100  
 ccagacgact cgggcaaaga cccaaagcca gacttcccca aattcctaag 150  
 cctcctgggc acagagatca ttgagaatgc agtcgagttc atcctccgct 200  
 ccattgtccag gaggcacagga tttatggaat ttgatgataa tgaaggaaaa 250  
 cattcatcaa agtgacatcc tcaggacaca ccatgtggc tctggacaa 300  
 tccaagagca gccaaatcct gcttttccag ttggctcca caagtctccc 350  
 aggacagagc cctcaaagca actcccaacg agttctcagg attcaggctc 400  
 tggcttcaac caaacagaa tcattttgaa cacctgact gcatttttgc 450  
 ttttagaaa ttagaataaa tatggcgctt tgggatcaca tagttgatgg 500  
 agaggaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 550  
 a 551

<210> 167  
 <211> 87  
 <212> PRT  
 <213> Homo sapiens

<400> 167  
 Met Ala Val Leu Val Leu Arg Leu Thr Val Val Leu Gly Leu Leu  
 1 5 10 15  
 Val Leu Phe Leu Thr Cys Tyr Ala Asp Asp Lys Pro Asp Lys Pro

	20		25		30
Asp Asp Lys Pro	Asp Asp Ser Gly Lys Asp Pro Lys Pro Asp Phe				
	35		40		45
Pro Lys Phe Leu	Ser Leu Leu Gly Thr Glu Ile Ile Glu Asn Ala				
	50		55		60
Val Glu Phe Ile	Leu Arg Ser Met Ser Arg Ser Thr Gly Phe Met				
	65		70		75
Glu Phe Asp Asp	Asn Glu Gly Lys His Ser Ser Lys				
	80		85		

<210> 168  
 <211> 1371  
 <212> DNA  
 <213> Homo sapiens

<400> 168  
 ggacgccagc gctgagcag gctgagcagc gaaaaagcca gtgcccagc 50  
 ggaagcacag ctcagagctg gtctgccatg gacatcctgg tccactcct 100  
 gcagctgctg gtgctgtctt ttaccctgcc cctgcaccto atggctctgc 150  
 tgggctgctg gcagccccctg tgcaaaagct acttccccta cctgatggcc 200  
 gtgctgactc ccaagagcaa cgcgaagatg gagagcaaga aacgggagct 250  
 cttcagccag ataaaggggc ttacaggagc ctccgggaaa gtggccctac 300  
 tggagctggg ctgcgggaacc ggagccaact ttacgttcta cccaccgggc 350  
 tgcagggtca cctgcctaga cccaaatccc cactttgaga agttcctgac 400  
 aaagagcatg gctgagaaca ggcacctcca atatgagcgg tttgtggtgg 450  
 ctctgggaga ggacatgaga cagctggctg atggctccat ggatgtggtg 500  
 gtctgcactc tgggtgctgt ctctgtgcag agcccaagga aggtcctgca 550  
 ggaggtccgg agagtactga gaccgggagg tgtgtctctt tctggggagc 600  
 atgtggcaga accatatgga agctgggcct tcatgtggca gcaagtttcc 650  
 gagcccacct ggaacacatc tggggatggc tgctgcctca ccagagagac 700  
 ctggaaggat ctgagaacg cccagttctc cgaatccaa atggaacgac 750  
 agccccctcc ctggaagtgg ctacctgttg ggccccacat catgggaaag 800  
 gctgtcaaac aatctttccc aagctccaag gcaactcatt gtcctctccc 850  
 cagcctccaa ttagaacaag ccaaccacca gcctatctat cttocactga 900  
 gagggaccta gcagaatgag agaagacatt catgtaccac ctactagtcc 950  
 ctctctcccc aacctctgcc agggcaatct ctaacttcaa tccgcctctc 1000  
 gacagtgaag aagctctact tctacgctga cccaggaggg aaacactagg 1050  
 accctgttgt atcctcaact gcaagtttct ggactagtct cccaacgttt 1100

gctcccaat gttgtccctt tcttcgttc ccatggtaaa gctcctctcg 1150  
 ctttctctct gaggtctacac ccatgcgtct ctaggaactg gtcacaaaaa 1200  
 tcatgggtgcc tgcacccctg ccaagccccc ctgacctct ctcaccaacta 1250  
 ccaccttctt cctgagctgg gggcaccagg gagaatcaga gatgtctggg 1300  
 atgccagagc aagactcaaa gaggcagagg tttgttctc aaatattttt 1350  
 taataaatag acgaaaccac g 1371

<210> 169

<211> 277

<212> PRT

<213> Homo sapiens

<400> 169

Met	Asp	Ile	Leu	Val	Pro	Leu	Leu	Gln	Leu	Leu	Val	Leu	Leu	Leu	15
1				5					10						
Thr	Leu	Pro	Leu	His	Leu	Met	Ala	Leu	Leu	Gly	Cys	Trp	Gln	Pro	30
				20					25						
Leu	Cys	Lys	Ser	Tyr	Phe	Pro	Tyr	Leu	Met	Ala	Val	Leu	Thr	Pro	45
				35					40						
Lys	Ser	Asn	Arg	Lys	Met	Glu	Ser	Lys	Lys	Arg	Glu	Leu	Phe	Ser	60
				50					55						
Gln	Ile	Lys	Gly	Leu	Thr	Gly	Ala	Ser	Gly	Lys	Val	Ala	Leu	Leu	75
				65					70						
Glu	Leu	Gly	Cys	Gly	Thr	Gly	Ala	Asn	Phe	Gln	Phe	Tyr	Pro	Pro	90
				80					85						
Gly	Cys	Arg	Val	Thr	Cys	Leu	Asp	Pro	Asn	Pro	His	Phe	Glu	Lys	105
				95					100						
Phe	Leu	Thr	Lys	Ser	Met	Ala	Glu	Asn	Arg	His	Leu	Gln	Tyr	Glu	120
				110					115						
Arg	Phe	Val	Val	Ala	Pro	Gly	Glu	Asp	Met	Arg	Gln	Leu	Ala	Asp	135
				125					130						
Gly	Ser	Met	Asp	Val	Val	Val	Cys	Thr	Leu	Val	Leu	Cys	Ser	Val	150
				140					145						
Gln	Ser	Pro	Arg	Lys	Val	Leu	Gln	Glu	Val	Arg	Arg	Val	Leu	Arg	165
				155					160						
Pro	Gly	Gly	Val	Leu	Phe	Phe	Trp	Glu	His	Val	Ala	Glu	Pro	Tyr	180
				170					175						
Gly	Ser	Trp	Ala	Phe	Met	Trp	Gln	Gln	Val	Phe	Glu	Pro	Thr	Trp	195
				185					190						
Lys	His	Ile	Gly	Asp	Gly	Cys	Cys	Leu	Thr	Arg	Glu	Thr	Trp	Lys	210
				200					205						
Asp	Leu	Glu	Asn	Ala	Gln	Phe	Ser	Glu	Ile	Gln	Met	Glu	Arg	Gln	225
				215					220						

Pro Pro Pro Leu Lys Trp Leu Pro Val Gly Pro His Ile Met Gly  
 230 235 240

Lys Ala Val Lys Gln Ser Phe Pro Ser Ser Lys Ala Leu Ile Cys  
 245 250 255

Ser Phe Pro Ser Leu Gln Leu Glu Gln Ala Thr His Gln Pro Ile  
 260 265 270

Tyr Leu Pro Leu Arg Gly Thr  
 275

<210> 170  
 <211> 1621  
 <212> DNA  
 <213> Homo sapiens

<400> 170  
 gtgggattta tttgagtgc aatcggttt ctcagtggtg gtggaagtgt 50  
 cctcatcgca ggcagatgt ggggctttgt ccgaacagct cccctctgcc 100  
 agcttctgta gataagggtt aaaaactaat atttatatga cagaagaaaa 150  
 agatgtcatt ccgtaaagta aacatcatca tcttggtcct ggctgttgtct 200  
 ctctctctac tggttttgca ccataacttc ctcagettga gcagttttgt 250  
 aaggaatgag gttacagatt caggaattgt agggcctcaa cctatagact 300  
 ttgtcccaaa tgctctccga catgcagtag atgggagaca agaggagatt 350  
 cctgtggtca tcgctgcac tgaagacagg cttggggggg ccattgcagc 400  
 tataaacagc attcagcaca aactctgcct caatgtgatt ttctacattg 450  
 ttactctcaa caatacagca gacctctcc ggtcctggct caacagtgat 500  
 tccctgaaaa gcacagata caaaattgtc aattttgacc ctaaaacttt 550  
 ggaaggaaaa gtaaaggagg atcctgacca gggggaatcc atgaaacctt 600  
 taacctttgc aaggttctac ttgccaatc ttggtcccag cgcaagaaga 650  
 gccatataca tggatgatga tgtaattgtg caaggtgata ttcttgccct 700  
 ttacaataca gcaactgaagc caggacatgc agctgcattt tcagaagatt 750  
 gtgattcagc ctctactaaa gttgtcatcc gtggagcagg aaaccagtac 800  
 aattacattg gctatcttga ctataaaaaa gaaagaattc gtaagctttc 850  
 catgaaagcc agcaattgct catttaatcc tggagttttt gttgcaaacc 900  
 tgacggaatg gaaacgacag aatataacta accaactgga aaaatggatg 950  
 aaactcaatg tagaagaggg actgtatagc agaaccctgg ctggtgatcat 1000  
 cacaacacct cctctgctta togtatttta tcaacagcac tctaccatcg 1050  
 atcctatgtg gaatgtccgc caccttggtt ccagtgtctg aaaacgatat 1100  
 tcacctcagt ttgtaaaggc tgccaagtta ctccattgga atggacattt 1150

gaagccatgg ggaaggactg cttcatatac tgatgtttgg gaaaaatggt 1200  
 atattccaga cccaacaggc aaattcaacc taatccgaag atataccgag 1250  
 atctcaaaca taaagtgaag cagaatttga actgtaagca agcattttctc 1300  
 aggaagtctt ggaagatagc atgcatggga agtaacagtt gctagggttc 1350  
 aatgcctatc ggtagcaagc catggaaaaa gatgtgtcag ctaggtaaag 1400  
 atgacaaact gccctgtctg gcagtcagct tcccagacag actatagact 1450  
 ataaatatgt ctccatctgc cttaccaagt gttttcttac tacaatgctg 1500  
 aatgactgga aagaagaact gatatggcta gttcagctag ctggtacaga 1550  
 taattcaaaa ctgctgttgg ttttaatttt gtaacctgtg gctgatctg 1600  
 taaataaaac ttacattttt c 1621

<210> 171  
 <211> 371  
 <212> PRT  
 <213> Homo sapiens

<400> 171  
 Met Ser Phe Arg Lys Val Asn Ile Ile Ile Leu Val Leu Ala Val  
 1 5 10 15  
 Ala Leu Phe Leu Leu Val Leu His His Asn Phe Leu Ser Leu Ser  
 20 25 30  
 Ser Leu Leu Arg Asn Glu Val Thr Asp Ser Gly Ile Val Gly Pro  
 35 40 45  
 Gln Pro Ile Asp Phe Val Pro Asn Ala Leu Arg His Ala Val Asp  
 50 55 60  
 Gly Arg Gln Glu Glu Ile Pro Val Val Ile Ala Ala Ser Glu Asp  
 65 70 75  
 Arg Leu Gly Gly Ala Ile Ala Ala Ile Asn Ser Ile Gln His Asn  
 80 85 90  
 Thr Arg Ser Asn Val Ile Phe Tyr Ile Val Thr Leu Asn Asn Thr  
 95 100 105  
 Ala Asp His Leu Arg Ser Trp Leu Asn Ser Asp Ser Leu Lys Ser  
 110 115 120  
 Ile Arg Tyr Lys Ile Val Asn Phe Asp Pro Lys Leu Leu Glu Gly  
 125 130 135  
 Lys Val Lys Glu Asp Pro Asp Gln Gly Glu Ser Met Lys Pro Leu  
 140 145 150  
 Thr Phe Ala Arg Phe Tyr Leu Pro Ile Leu Val Pro Ser Ala Lys  
 155 160 165  
 Lys Ala Ile Tyr Met Asp Asp Asp Val Ile Val Gln Gly Asp Ile  
 170 175 180  
 Leu Ala Leu Tyr Asn Thr Ala Leu Lys Pro Gly His Ala Ala Ala



	185		190		195
Phe Ser Glu Asp	Cys Asp Ser Ala Ser	Thr Lys Val Val Ile Arg			
	200		205		210
Gly Ala Gly Asn Gln Tyr Asn Tyr Ile		Gly Tyr Leu Asp Tyr Lys			
	215		220		225
Lys Glu Arg Ile Arg Lys Leu Ser Met		Lys Ala Ser Thr Cys Ser			
	230		235		240
Phe Asn Pro Gly Val Phe Val Ala Asn		Leu Thr Glu Trp Lys Arg			
	245		250		255
Gln Asn Ile Thr Asn Gln Leu Glu Lys		Trp Met Lys Leu Asn Val			
	260		265		270
Glu Glu Gly Leu Tyr Ser Arg Thr Leu		Ala Gly Ser Ile Thr Thr			
	275		280		285
Pro Pro Leu Leu Ile Val Phe Tyr Gln		Gln His Ser Thr Ile Asp			
	290		295		300
Pro Met Trp Asn Val Arg His Leu Gly		Ser Ser Ala Gly Lys Arg			
	305		310		315
Tyr Ser Pro Gln Phe Val Lys Ala Ala		Lys Leu Leu His Trp Asn			
	320		325		330
Gly His Leu Lys Pro Trp Gly Arg Thr		Ala Ser Tyr Thr Asp Val			
	335		340		345
Trp Glu Lys Trp Tyr Ile Pro Asp Pro		Thr Gly Lys Phe Asn Leu			
	350		355		360
Ile Arg Arg Tyr Thr Glu Ile Ser Asn		Ile Lys			
	365		370		

<210> 172  
 <211> 585  
 <212> DNA  
 <213> Homo sapiens  
  
 <220>  
 <221> unsure  
 <222> 71, 76, 86, 91, 162, 220, 269, 281  
 <223> unknown base

<400> 172  
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 aggttacaga ttcaggaatt ntaggncctc aacctntaga ntttgtccca 100  
 aatgttctcc gacatgcagt agatggggaga caagaggaga ttctgtgtgt 150  
 catcgctgca tntgaagaca ggcttggggg ggccattgca gctataaaca 200  
 gcatcagca caacactcgn tccaatgtga ttttctacat tgttactctc 250  
 aacaatacag cagaccatnt cgggtccttg ntcaacagtg attccctgaa 300  
 aagcatcaga tacaaaattg tcaattttga ccctaaactt ttggaaggaa 350

aagtaaagga ggatcctgac cagggggaat ccatgaaacc tttaaccttt 400  
 gcaaggttct acttgccaat tctggttccc agcgcaaaga aggccatata 450  
 catggatgat gatgtaattg tgcaaggtga tattcttgcc ctttacaata 500  
 cagcactgaa gccaggacat gcagctgcat ttccagaaga ttgtgatcca 550  
 gcctctacta aagttgtcat ccgtggagca ggaaa 585

<210> 173  
 <211> 1866  
 <212> DNA  
 <213> Homo sapiens

<400> 173  
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 gcggtcgcca cggagctaga gggcaagtgt gctcggccca gcgtgcaggg 100  
 aacgcgggcg gccagacaac gggctgggct ccggggcctg cggcgcgggc 150  
 gctgagctgg caggcggggt cggggcgcgg gctgcatccg catctcctcc 200  
 atcgcttcca gtaaggcgcg ccgcgcgag cctttgaggg gaacgacttg 250  
 tcggagccct aaccaggggt gtctctgagc ctggtgggat ccccgagcgg 300  
 tcacatcact ttccgatoac ttcaaagtgg ttaaaaaacta atatttata 350  
 gacagaagaa aaagatgtca ttccgtaaag taaacatcat catcttggtc 400  
 ctgggctggt gctctcttct tactggtttt gcaccataac ttctcagct 450  
 tgaggcagtt tgttaaggaa tgaggttaca gattcaggaa ttgtaggcgc 500  
 tcaacctata ggactttgtc ccaaatgtct tccgacatgc agtagatggg 550  
 agacaagagg agattcctgt ggtcatcgct gcatctgaag acaggcttgg 600  
 gggggccatt gcagctataa acagcattca gcacaacact cgctccaatg 650  
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 tgggtctaac agtgattccc tgaaaagcat cagatacaaa attgtcaatt 750  
 ttgaccctaa acttttggaa ggaaaagtaa agggagatcc tgaccagggg 800  
 gaatccatga aacctttaac ctttgcaagg ttctacttgc caattctggg 850  
 ttcccagcgc aaagaaggcc atatacatgg atgatgatgt aattgtgcaa 900  
 ggtgatattc ttgcocctta caatacagca ctgaagccag gacatgcagc 950  
 tgcattttca gaagattgtg attcagcctc tactaaagtt gtcacccgtg 1000  
 gagcaggaaa ccagtacaat tacattggct atcttgacta taaaaaggaa 1050  
 agaattcgta agctttccat gaaagccagc acttgctcat ttaactcgtg 1100  
 agtttttggc gcaaacctga cggaatggaa acgacagaat ataactaacc 1150  
 aactggaaaa atggatgaaa ctcaatgtag aagagggact gtatagcaga 1200

accctggctg gtagcatcac aacacctcct ctgcttatcg tattttatca 1250  
 acagcactct accatcgatc ctatgtggaa tgtccgccac cttggttcca 1300  
 gtgctggaaa acgatattca cctcagtttg taaaggctgc caagttactc 1350  
 cattggaatg gacatttgaa gccatgggga aggactgctt catatactga 1400  
 tgtttgggga aaaatgggtat attccagacc caacaggcaa attcaacctc 1450  
 atccgaagat ataccgagat ctcaaacata aagtgaacaa gaatttgaac 1500  
 tgtaagcaag cattttctcag gaagtctcgg aagatagcat gcgtgggaag 1550  
 taacagttgc taggttcaa tgcctatcgg tagcaagcca tggaaaaaga 1600  
 tgtgtcagct aggtaaagat gacaaactgc cctgtctggc agtcagcttc 1650  
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 tttcttacta caatgctgaa tgactggaaa gaagaactga tatggctagt 1750  
 tcagctagct ggtacagata attcaaaact gctgttggtt ttaattttgt 1800  
 aacctgtggc ctgactctga aataaaactt acatttttca ataggtaaaa 1850  
 aaaaaaaaa aaaaaa 1866

<210> 174  
 <211> 823  
 <212> DNA  
 <213> Homo sapiens

<400> 174  
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 acagcctcct ctgaaggccg gccataccag agtctgcct cggcatgggc 100  
 ctccacattg aggcagctcc actgtctgtg ctggtctgag ggtgctgcct 150  
 gtcattgggg cagccatctc ccagggggcc ctcatcgcca tcgtctgcaa 200  
 cggctctgtg ggcttcttgc tgctgtctgt ctgggtcctc ctctgctggg 250  
 cctgccattc tcgtctgcgc acgttgactc tctctctgaa tccagtccca 300  
 actccagccc tggccccctg cctgagaagg ccccaaccac ccagaagccc 350  
 agccatgaag gcagctacct gctgcagccc tgaaggcccc tggcctagcc 400  
 tggagcccag gacctaaagtc cacctcacct agagcctgga attaggatcc 450  
 cagagttcag ccagcctggg gtccaagaact caagagtcgc cctgcttgga 500  
 gctggacca cgggcccgga gtctagccag cttggctcca ataggagctc 550  
 agtggcccta aggagatggg cctgggggtg gggcttatga gttggtgcta 600  
 gagccagggc catctggact atgctccatc ccaagggcc aagggtcagg 650  
 gccgggtcca ctctttccct aggctgagca cctctaggcc ctctaggttg 700  
 gggaagcaaa ctggaaccca tggcaataat aggaggggtg ccaggctggg 750

ccccccccc gtgcctccca gtgtttgctg gataataaat ggaactatgg 800

ctctaaaaaa aaaaaaaaaa aaa 823

<210> 175

<211> 87

<212> PRT

<213> Homo sapiens

<400> 175

Met Gly Ala Ala Ile Ser Gln Gly Ala Leu Ile Ala Ile Val Cys  
1 5 10 15

Asn Gly Leu Val Gly Phe Leu Leu Leu Leu Trp Val Ile Leu  
20 25 30

Cys Trp Ala Cys His Ser Arg Leu Pro Thr Leu Thr Leu Ser Leu  
35 40 45

Asn Pro Val Pro Thr Pro Ala Leu Ala Pro Val Leu Arg Arg Pro  
50 55 60

His His Pro Arg Ser Pro Ala Met Lys Ala Ala Thr Cys Cys Ser  
65 70 75

Pro Glu Gly Pro Trp Pro Ser Leu Glu Pro Arg Thr  
80 85

<210> 176

<211> 1660

<212> DNA

<213> Homo sapiens

<400> 176

gtttgaattc ctccaactat acccaacagtc caaaagcaga ctcaactgtgt 50

cccaggctac cagttcctcc aagcaagtca ttcccttat ttaaccgatg 100

tgtccctcaa acacctgagt gctactccct atttgcattc gttttgataa 150

atgatgttga caccctccac cgaattctaa gtggaatcat gtcgggaaga 200

gatacaatcc ttggcctgtg tatcctcgca ttagccttgt ctttggocat 250

gatgtttacc ttcagattca tcaccacctc tctggttcac attttcattt 300

cattgggttat ttgggattg ttgtttgtct gcggtgtttt atgggtggctg 350

tattatgact ataccaacga cctcagcata gaattggaca cagaagaagg 400

aaatatgaag tgogtgcctg gggtttgctat cgtatocaca ggcacacagg 450

cagtgcctgt cgtcttgatt tttgttctca gaaagagaat aaaattgaca 500

gttgagcttt tccaatcac aaataaagcc atcagcagtg ctccttctct 550

gctgttccag ccaactgtga catttgccat cctcattttc tcttgggtcc 600

tctgggtggc tgtgctgctg agcctgggaa ctgcaggagc tgcocaggtt 650

atggaagcgc gccaaagtga atataagccc ctttcgggca ttcggtacat 700

gtggtcgtac catttaattg gctcactctg gactagttaa ttcactcttg 750

cgtgccagca aatgactata gctggggcag tggttacttg ttatttcaac 800  
 agaagtaaaa atgatcctcc tgatcatccc atcctttcgt ctctctccat 850  
 tctctcttcc taccatcaag gaaccgttgt gaaaggggtca tttttaatct 900  
 ctgtgggtgag gattccgaga atcattgtca tgtacatgca aaacgcactg 950  
 aaagaacagc agcatgggtgc attgtccagg tacctgttcc gatgctgcta 1000  
 ctgctgtttc tgggtgtcttg acaaatacct gctccatctc aaccagaatg 1050  
 catatactac aactgctatt aatgggacag atttctgtac atcagcaaaa 1100  
 gatgcattca aaatctgtgc caagaactca agtcaactta catctattaa 1150  
 ctgcttttga gacttcataa tttttctagg aaaggtgtta gtgggtgtgt 1200  
 tcaactgtttt tggaggactc atggctttta actacaatcg ggcattccag 1250  
 gtgtgggcag tccctctgtt attggtagct tttttgcct acttagtagc 1300  
 ccatagtttt ttatctgtgt ttgaaactgt gctggatgca cttttcctgt 1350  
 gttttgtctgt tgatctggaa acaaatgatg gatcgtcaga aaagccctac 1400  
 tttatggatc aagaatttct gagtttcgta aaaaggagca acaaatataa 1450  
 caatgcaagg gcacagcagg acaagcactc attaaggaat gaggagggaa 1500  
 cagaactcca ggccattgtg agatagatac ccatttaggt atctgtacct 1550  
 ggaaaacatt tccttctaag agccatttac agaatagaag atgagaccac 1600  
 tagagaaaag ttagtgaatt tttttttaa agacctaata aaccctatct 1650  
 ttctcaaaa 1660

<210> 177

<211> 445

<212> PRT

<213> Homo sapiens

<400> 177

Met	Ser	Gly	Arg	Asp	Thr	Ile	Leu	Gly	Leu	Cys	Ile	Leu	Ala	Leu
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Ala	Leu	Ser	Leu	Ala	Met	Met	Phe	Thr	Phe	Arg	Phe	Ile	Thr	Thr
			20						25					30
Leu	Leu	Val	His	Ile	Phe	Ile	Ser	Leu	Val	Ile	Leu	Gly	Leu	Leu
			35						40					45
Phe	Val	Cys	Gly	Val	Leu	Trp	Trp	Leu	Tyr	Tyr	Asp	Tyr	Thr	Asn
			50						55					60
Asp	Leu	Ser	Ile	Glu	Leu	Asp	Thr	Glu	Arg	Glu	Asn	Met	Lys	Cys
			65						70					75
Val	Leu	Gly	Phe	Ala	Ile	Val	Ser	Thr	Gly	Ile	Thr	Ala	Val	Leu
			80						85					90
Leu	Val	Leu	Ile	Phe	Val	Leu	Arg	Lys	Arg	Ile	Lys	Leu	Thr	Val

	95		100		105
Glu Leu Phe Gln	Ile Thr Asn Lys Ala	Ile Ser Ser Ala Pro	Phe		
	110		115		120
Leu Leu Phe Gln	Pro Leu Trp Thr Phe	Ala Ile Leu Ile Phe	Phe		
	125		130		135
Trp Val Leu Trp	Val Ala Val Leu Leu	Ser Leu Gly Thr Ala	Gly		
	140		145		150
Ala Ala Gln Val	Met Glu Gly Gly Gln	Val Glu Tyr Lys Pro	Leu		
	155		160		165
Ser Gly Ile Arg	Tyr Met Trp Ser Tyr	His Leu Ile Gly Leu	Ile		
	170		175		180
Trp Thr Ser Glu	Phe Ile Leu Ala Cys	Gln Gln Met Thr Ile	Ala		
	185		190		195
Gly Ala Val Val	Thr Cys Tyr Phe Asn	Arg Ser Lys Asn Asp	Pro		
	200		205		210
Pro Asp His Pro	Ile Leu Ser Ser Leu	Ser Ile Leu Phe Phe	Tyr		
	215		220		225
His Gln Gly Thr	Val Val Lys Gly Ser	Phe Leu Ile Ser Val	Val		
	230		235		240
Arg Ile Pro Arg	Ile Ile Val Met Tyr	Met Gln Asn Ala Leu	Lys		
	245		250		255
Glu Gln Gln His	Gly Ala Leu Ser Arg	Tyr Leu Phe Arg Cys	Cys		
	260		265		270
Tyr Cys Cys Phe	Trp Cys Leu Asp Lys	Tyr Leu Leu His Leu	Asn		
	275		280		285
Gln Asn Ala Tyr	Thr Thr Ala Ile	Asn Gly Thr Asp Phe	Cys		
	290		295		300
Thr Ser Ala Lys	Asp Ala Phe Lys Ile	Leu Ser Lys Asn Ser	Ser		
	305		310		315
His Phe Thr Ser	Ile Asn Cys Phe Gly	Asp Phe Ile Ile Phe	Leu		
	320		325		330
Gly Lys Val Leu	Val Val Cys Phe Thr	Val Phe Gly Gly Leu	Met		
	335		340		345
Ala Phe Asn Tyr	Asn Arg Ala Phe Gln	Val Trp Ala Val Pro	Leu		
	350		355		360
Leu Leu Val Ala	Phe Phe Ala Tyr Leu	Val Ala His Ser Phe	Leu		
	365		370		375
Ser Val Phe Glu	Thr Val Leu Asp Ala	Leu Phe Leu Cys Phe	Ala		
	380		385		390
Val Asp Leu Glu	Thr Asn Asp Gly Ser	Ser Glu Lys Pro Tyr	Phe		
	395		400		405
Met Asp Gln Glu	Phe Leu Ser Phe Val	Lys Arg Ser Asn Lys	Leu		

	410		415		420
Asn Asn Ala Arg	Ala Gln Gln Asp Lys His Ser Leu Arg Asn Glu				
	425		430		435
Glu Gly Thr Glu	Leu Gln Ala Ile Val Arg				
	440		445		

<210> 178  
 <211> 2773  
 <212> DNA  
 <213> Homo sapiens

<400> 178  
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 aagggaaaaa gaatatcat tctgtgtggt gaaaattttt tgaaaaaaaa 150  
 attgccttct tcaacaagg gtgtcattct gatatttatg aggactgttg 200  
 ttctcactat gaaggcatct gttattgaaa tgttctctgt tttgctgggtg 250  
 actggagtac attcaacaaa agaaacggca aagaagatta aaaggcccaa 300  
 gttcactgtg cctcagatca actgcgatgt caaagccgga aagatcatcg 350  
 atcctgagtt cattgtgaaa tgtccagcag gatgccaaaga ccccaaatc 400  
 catgtttatg gcactgacgt gtatgcatcc tactccagtg tgtgtggcgc 450  
 tgccgtacac agtgggtgtgc ttgataattc aggagggaat atacttgttc 500  
 ggaaggttgc tggacagtct ggttacaaag ggagttatc caacggtgtc 550  
 caatcgttat cctaccacg atggagagaa tcctttatcg tcttagaaa 600  
 taaaccocaaa aagggtgtaa cctaccatc agctottaca tactcatcat 650  
 cgaaaagtcc agctgcccaa gcaggtgaga ccacaaaagc ctatcagagg 700  
 ccacctatc cagggaacac tgcacagccg gtcaactctga tgcagcttct 750  
 ggctgtcact gtagctgtgg ccacccccac cactttgcc aaggcatccc 800  
 cttctgtctg ttctaccacc agcatcccca gaccacaatc agtgggccac 850  
 aggagccagg agatgatct ctggtccact gccacctaca caagcagcca 900  
 aaacaggccc agagctgac caggtatcca aaggcaagat ccttcaggag 950  
 ctgccttcca gaaacctgtt ggagcggatg tcagcctggg acttgttcca 1000  
 aaagaagaat tgagcacaca gtctttggag ccagtatccc tgggagatcc 1050  
 aaactgcaaa attgacttgt cgtttttaat tgatgggagc accagcattg 1100  
 gcaaacggcg attccgaac cagaagcagc tctctggctga tgttgcccaa 1150  
 gctcttgaca ttggccctgc cgggtccact atgggtgttg tocagtatgg 1200  
 agacaacct gctactcact ttaacctcaa gacacacag aattctcag 1250

atctgaagac agccatagag aaaattactc agagaggagg actttctaata 1300  
 gtaggctggg ccatctcctt tgtgaccaag aacttctttt ccaaagccaa 1350  
 tggaaacaga agcggggctc ccaatgtggt ggtggtgatg gtggatggct 1400  
 ggccacgga caaagtggag gaggcttcaa gacttgcgag agagtccagga 1450  
 atcaacattt tcttcatcac cattgaaggt gctgctgaaa atgagaagca 1500  
 gtatgtgtg gagcccaact ttgcaacaa ggcgtgtgc agaacaacg 1550  
 gcttctaact gctccacgtg cagagctggt ttggcctcca caagaccctg 1600  
 cagcctctgg tgaagcgggt ctgcgacact gaccgcctgg cctgcagcaa 1650  
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 gtgtggggac gggcaacttc cgcacogtcc tccagtttgt gaccaacctc 1750  
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 gtacacctac gaacacgggc tggagtttg gttcgacaag tacagcagca 1850  
 agcctgacat cctcaacgcc atcaagaggg tgggctactg gagtgtggc 1900  
 accagcacgg gggctgccat caacttcgcc ctggagcagc tcttaagaa 1950  
 gtccaagccc aacaagagga agttaatgat cctcatcacc gacgggaggt 2000  
 cctacgacga cgtccggtc ccagccatg ctgccatct gaaggagtg 2050  
 atcacctatg cgataggcgt tgcctgggct gcccaagagg agctagaagt 2100  
 cattgcact caccocgcca gagaccactc cttcttgtg gacgagttt 2150  
 acaacctcoa tcagtatgtc ccaggatca tccagaacat ttgtacagag 2200  
 ttcaactcac agcctcggaa ctgaattcag agcaggcaga gcaccagcaa 2250  
 gtgctgcttt actaactgac gtgttgacc accccaccg ttaatggggc 2300  
 acgcacggtg catcaagtct tgggcagggc atggagaaac aaatgtctt 2350  
 ttattattct ttgocatcat gcttttcat attccaaaac ttggagtac 2400  
 aaagatgac acaaacgtat agaatgagc aaaaggctac atcatgttg 2450  
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 gaatacagtg cagcccttac gacaggctta cgtagagctt ttgtgagatt 2550  
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 aaaaaaaaaa aaaaaaaaaa aag 2773

<210> 179



<211> 678  
 <212> PRT  
 <213> Homo sapiens

<400> 179

Met	Arg	Thr	Val	Val	Leu	Thr	Met	Lys	Ala	Ser	Val	Ile	Glu	Met
1				5					10					15
Phe	Leu	Val	Leu	Leu	Val	Thr	Gly	Val	His	Ser	Asn	Lys	Glu	Thr
			20						25					30
Ala	Lys	Lys	Ile	Lys	Arg	Pro	Lys	Phe	Thr	Val	Pro	Gln	Ile	Asn
			35					40						45
Cys	Asp	Val	Lys	Ala	Gly	Lys	Ile	Ile	Asp	Pro	Glu	Phe	Ile	Val
			50					55						60
Lys	Cys	Pro	Ala	Gly	Cys	Gln	Asp	Pro	Lys	Tyr	His	Val	Tyr	Gly
			65					70						75
Thr	Asp	Val	Tyr	Ala	Ser	Tyr	Ser	Ser	Val	Cys	Gly	Ala	Ala	Val
			80					85						90
His	Ser	Gly	Val	Leu	Asp	Asn	Ser	Gly	Gly	Lys	Ile	Leu	Val	Arg
			95					100						105
Lys	Val	Ala	Gly	Gln	Ser	Gly	Tyr	Lys	Gly	Ser	Tyr	Ser	Asn	Gly
			110					115						120
Val	Gln	Ser	Leu	Ser	Leu	Pro	Arg	Trp	Arg	Glu	Ser	Phe	Ile	Val
			125					130						135
Leu	Glu	Ser	Lys	Pro	Lys	Lys	Gly	Val	Thr	Tyr	Pro	Ser	Ala	Leu
			140					145						150
Thr	Tyr	Ser	Ser	Ser	Lys	Ser	Pro	Ala	Ala	Gln	Ala	Gly	Glu	Thr
			155					160						165
Thr	Lys	Ala	Tyr	Gln	Arg	Pro	Pro	Ile	Pro	Gly	Thr	Thr	Ala	Gln
			170					175						180
Pro	Val	Thr	Leu	Met	Gln	Leu	Leu	Ala	Val	Thr	Val	Ala	Val	Ala
			185					190						195
Thr	Pro	Thr	Thr	Leu	Pro	Arg	Pro	Ser	Pro	Ser	Ala	Ala	Ser	Thr
			200					205						210
Thr	Ser	Ile	Pro	Arg	Pro	Gln	Ser	Val	Gly	His	Arg	Ser	Gln	Glu
			215					220						225
Met	Asp	Leu	Trp	Ser	Thr	Ala	Thr	Tyr	Thr	Ser	Ser	Gln	Asn	Arg
			230					235						240
Pro	Arg	Ala	Asp	Pro	Gly	Ile	Gln	Arg	Gln	Asp	Pro	Ser	Gly	Ala
			245					250						255
Ala	Phe	Gln	Lys	Pro	Val	Gly	Ala	Asp	Val	Ser	Leu	Gly	Leu	Val
			260					265						270
Pro	Lys	Glu	Glu	Leu	Ser	Thr	Gln	Ser	Leu	Glu	Pro	Val	Ser	Leu
			275					280						285
Gly	Asp	Pro	Asn	Cys	Lys	Ile	Asp	Leu	Ser	Phe	Leu	Ile	Asp	Gly

	290		295		300
Ser Thr Ser Ile	Gly Lys Arg Arg Phe	Arg Ile Gln Lys Gln	Leu		
	305		310		315
Leu Ala Asp Val	Ala Gln Ala Leu Asp	Ile Gly Pro Ala Gly	Pro		
	320		325		330
Leu Met Gly Val	Val Gln Tyr Gly Asp	Asn Pro Ala Thr His	Phe		
	335		340		345
Asn Leu Lys Thr	His Thr Asn Ser Arg	Asp Leu Lys Thr Ala	Ile		
	350		355		360
Glu Lys Ile Thr	Gln Arg Gly Gly Leu	Ser Asn Val Gly Arg	Ala		
	365		370		375
Ile Ser Phe Val	Thr Lys Asn Phe Phe	Ser Lys Ala Asn Gly	Asn		
	380		385		390
Arg Ser Gly Ala	Pro Asn Val Val Val	Val Met Val Asp Gly	Trp		
	395		400		405
Pro Thr Asp Lys	Val Glu Glu Ala Ser	Arg Leu Ala Arg Glu	Ser		
	410		415		420
Gly Ile Asn Ile	Phe Phe Ile Thr Ile	Glu Gly Ala Ala Glu	Asn		
	425		430		435
Glu Lys Gln Tyr	Val Val Glu Pro Asn	Phe Ala Asn Lys Ala	Val		
	440		445		450
Cys Arg Thr Asn	Gly Phe Tyr Ser Leu	His Val Gln Ser Trp	Phe		
	455		460		465
Gly Leu His Lys	Thr Leu Gln Pro Leu	Val Lys Arg Val Cys	Asp		
	470		475		480
Thr Asp Arg Leu	Ala Cys Ser Lys Thr	Cys Leu Asn Ser Ala	Asp		
	485		490		495
Ile Gly Phe Val	Ile Asp Gly Ser Ser	Ser Val Gly Thr Gly	Asn		
	500		505		510
Phe Arg Thr Val	Leu Gln Phe Val Thr	Asn Leu Thr Lys Glu	Phe		
	515		520		525
Glu Ile Ser Asp	Thr Asp Thr Arg Ile	Gly Ala Val Gln Tyr	Thr		
	530		535		540
Tyr Glu Gln Arg	Leu Glu Phe Gly Phe	Asp Lys Tyr Ser Ser	Lys		
	545		550		555
Pro Asp Ile Leu	Asn Ala Ile Lys Arg	Val Gly Tyr Trp Ser	Gly		
	560		565		570
Gly Thr Ser Thr	Gly Ala Ala Ile Asn	Phe Ala Leu Glu Gln	Leu		
	575		580		585
Phe Lys Lys Ser	Lys Pro Asn Lys Arg	Lys Leu Met Ile Leu	Ile		
	590		595		600
Thr Asp Gly Arg	Ser Tyr Asp Asp Val	Arg Ile Pro Ala Met	Ala		

605	610	615
Ala His Leu Lys Gly Val Ile Thr Tyr	Ala Ile Gly Val Ala Trp	
620	625	630
Ala Ala Gln Glu Glu Leu Glu Val Ile	Ala Thr His Pro Ala Arg	
635	640	645
Asp His Ser Phe Phe Val Asp Glu Phe	Asp Asn Leu His Gln Tyr	
650	655	660
Val Pro Arg Ile Ile Gln Asn Ile Cys	Thr Glu Phe Asn Ser Gln	
665	670	675

Pro Arg Asn

<210> 180  
 <211> 1759  
 <212> DNA  
 <213> Homo sapiens

<400> 180  
 caggatgaac tgggtgcagt ggctgctgct gctgcggggg cgctgagagg 50  
 acacgagctc tatgcctttc cggetgctca tcccgetcgg cctcctgtgc 100  
 gcgctgctgc ctcagcacca tgggtgcgcca ggtcccgcgc gctcccgcgc 150  
 agatcccgcc cactacagtt ttctctgac tctaattgat gcaactggaca 200  
 ccttgctgat ttggggaat gtctcagaat tccaaagagt ggttgaagtg 250  
 ctccaggaca gcgtggactt tgatattgat gtgaacgcct ctgtgtttga 300  
 aacaacatt cgagtggtag gaggactcct gtctgctcat ctgctctcca 350  
 agaaggctgg ggtggaagta gaggctggat ggccctgttc cgggcctctc 400  
 ctgagaatgg ctgaggaggc ggcccgaata ctctccag cctttcagac 450  
 cccactggc atgccatatg gaacagtga cttacttcat ggcgtgaacc 500  
 caggagagac ccctgtcacc tgtacgcag ggattgggac cttcattgtt 550  
 gaatttgcca ccctgagcag cctcactggt gaccgcgtgt tcgaagatgt 600  
 ggccagagtg gctttgatgc gcctctggga gagccggtca gatatcgggc 650  
 tggtcggcaa ccacattgat gtgetcactg gcaagtgggt ggcccaggac 700  
 gcaggcatcg gggctggcgt ggactcctac tttagtact tgggtaagg 750  
 agccatcctg cttcaggata agaagctcat ggccatgttc ctgagtata 800  
 acaagccat ccggaactac acccgcttcg atgactggta cctgtgggtt 850  
 cagatgtaca aggggactgt gtccatgcca gtcttcag ccttgagggc 900  
 ctactggcct ggtcttcaga gcctcattgg agacattgac aatgccatga 950  
 ggaccttct caactactac actgtatgga agcagtttgg ggggctcccg 1000

gaattctaca acattcctca gggatacaca gtggagaagc gagagggcta 1050  
 ccacattcgg ccagaactta ttgaaagcgc aatgtacctc taccgtgccca 1100  
 cgggggatcc caccctccta gaactcggaa gagatgctgt ggaatccatt 1150  
 gaaaaaatca gcaaggtgga gtgcggattt gcaacaatca aagatctcgc 1200  
 agaccacaag ctggacaacc gcatggagtc gttcttcctg gccgagactg 1250  
 tgaaataact ctacctctgt tttagcccaa ccaacttcac ccacaacaat 1300  
 gggctccacct tcgacgcggt gatcaccccc tatggggagt gcatcctggg 1350  
 ggctgggggg tacatcttca acacagaagc tcaccccatc gaccttgccg 1400  
 ccctgcactg ctgccagagg ctgaaggaag agcagtgagg ggtggaggac 1450  
 ttgatgaggg aattctactc tctcaaacgg agcaggtcga aatttcagaa 1500  
 aaacactggt agttcggggc catgggaacc tcagcaagg ccaggaaacac 1550  
 tcttctcacc agaaaacat gaccaggcaa gggagaggaa gcctgccaaa 1600  
 cagaaggtcc cacttctcag ctgccccagt cagcccttca cctccaagtt 1650  
 ggcatctact ggacaggttt tcttagactc ctcataacca ctggataatt 1700  
 tttttatttt tatttttttg aggcataaact ataataaatt gcttttggtc 1750  
 atcataaaa 1759

<210> 181  
 <211> 541  
 <212> PRT  
 <213> Homo sapiens

<400> 181  
 Met Pro Phe Arg Leu Leu Ile Pro Leu Gly Leu Leu Cys Ala Leu  
 1 5 10  
 Leu Pro Gln His His Gly Ala Pro Gly Pro Asp Gly Ser Ala Pro  
 20 25 30  
 Asp Pro Ala His Tyr Ser Phe Ser Leu Thr Leu Ile Asp Ala Leu  
 35 40 45  
 Asp Thr Leu Leu Ile Leu Gly Asn Val Ser Glu Phe Gln Arg Val  
 50 55 60  
 Val Glu Val Leu Gln Asp Ser Val Asp Phe Asp Ile Asp Val Asn  
 65 70 75  
 Ala Ser Val Phe Glu Thr Asn Ile Arg Val Val Gly Gly Leu Leu  
 80 85 90  
 Ser Ala His Leu Leu Ser Lys Lys Ala Gly Val Glu Val Glu Ala  
 95 100 105  
 Gly Trp Pro Cys Ser Gly Pro Leu Leu Arg Met Ala Glu Glu Ala  
 110 115 120  
 Ala Arg Lys Leu Leu Pro Ala Phe Gln Thr Pro Thr Gly Met Pro

	125		130		135
Tyr Gly Thr Val	Asn Leu Leu His Gly	Val Asn Pro Gly Glu Thr			
	140	145	150		
Pro Val Thr Cys	Thr Ala Gly Ile Gly	Thr Phe Ile Val Glu Phe			
	155	160	165		
Ala Thr Leu Ser	Ser Leu Thr Gly Asp	Pro Val Phe Glu Asp Val			
	170	175	180		
Ala Arg Val Ala	Leu Met Arg Leu Trp	Glu Ser Arg Ser Asp Ile			
	185	190	195		
Gly Leu Val Gly	Asn His Ile Asp Val	Leu Thr Gly Lys Trp Val			
	200	205	210		
Ala Gln Asp Ala	Gly Ile Gly Ala Gly	Val Asp Ser Tyr Phe Glu			
	215	220	225		
Tyr Leu Val Lys	Gly Ala Ile Leu Leu	Gln Asp Lys Lys Leu Met			
	230	235	240		
Ala Met Phe Leu	Glu Tyr Asn Lys Ala	Ile Arg Asn Tyr Thr Arg			
	245	250	255		
Phe Asp Asp Trp	Tyr Leu Trp Val Gln	Met Tyr Lys Gly Thr Val			
	260	265	270		
Ser Met Pro Val	Phe Gln Ser Leu Glu	Ala Tyr Trp Pro Gly Leu			
	275	280	285		
Gln Ser Leu Ile	Gly Asp Ile Asp Asn	Ala Met Arg Thr Phe Leu			
	290	295	300		
Asn Tyr Tyr Thr	Val Trp Lys Gln Phe	Gly Gly Leu Pro Glu Phe			
	305	310	315		
Tyr Asn Ile Pro	Gln Gly Tyr Thr Val	Glu Lys Arg Glu Gly Tyr			
	320	325	330		
Pro Leu Arg Pro	Glu Leu Ile Glu Ser	Ala Met Tyr Leu Tyr Arg			
	335	340	345		
Ala Thr Gly Asp	Pro Thr Leu Leu Glu	Leu Gly Arg Asp Ala Val			
	350	355	360		
Glu Ser Ile Glu	Lys Ile Ser Lys Val	Glu Cys Gly Phe Ala Thr			
	365	370	375		
Ile Lys Asp Leu	Arg Asp His Lys Leu	Asp Asn Arg Met Glu Ser			
	380	385	390		
Phe Phe Leu Ala	Glu Thr Val Lys Tyr	Leu Tyr Leu Leu Phe Asp			
	395	400	405		
Pro Thr Asn Phe	Ile His Asn Asn Gly	Ser Thr Phe Asp Ala Val			
	410	415	420		
Ile Thr Pro Tyr	Gly Glu Cys Ile Leu	Gly Ala Gly Gly Tyr Ile			
	425	430	435		
Phe Asn Thr Glu	Ala His Pro Ile Asp	Leu Ala Ala Leu His Cys			

	440		445		450
Cys Gln Arg Leu	Lys Glu Glu Gln Trp	Glu Val Glu Asp Leu	Met		
	455	460	465		
Arg Glu Phe Tyr	Ser Leu Lys Arg Ser	Arg Ser Lys Phe Gln	Lys		
	470	475	480		
Asn Thr Val Ser	Ser Gly Pro Trp Glu	Pro Pro Ala Arg Pro	Gly		
	485	490	495		
Thr Leu Phe Ser	Pro Glu Asn His Asp	Gln Ala Arg Glu Arg	Lys		
	500	505	510		
Pro Ala Lys Gln	Lys Val Pro Leu Leu	Ser Cys Pro Ser Gln	Pro		
	515	520	525		
Phe Thr Ser Lys	Leu Ala Leu Leu Gly	Gln Val Phe Leu Asp	Ser		
	530	535	540		

Ser

<210> 182  
 <211> 2056  
 <212> DNA  
 <213> Homo sapiens

<400> 182  
 aaagttacat tttctctgga actctcctag gccactccct gctgatgcaa 50  
 catctggggtt tgggcagaaa ggagggtgct tcggagcccg ccctttctga 100  
 gcttcctggg ccggtcttag aacaattcag gcttcgtctgc gactcagacc 150  
 tcagctccaa catatgcatt ctgaagaaag atggctgaga tggacagaat 200  
 gctttatttt ggaagaaaac aatgttctag gtcaaaactga gtctaccaa 250  
 tgcagaacttt cacaatgggt ctagaagaaa tctggacaag tcttttcatg 300  
 tggtttttct acgcattgat tccatgtttg ctacagatg aagtggccat 350  
 tctgcctgcc cctcagaacc tctctgtact ctcaaccaac atgaagcatc 400  
 tcttgatgtg gagccagtg atcgcgctg gagaacagt gtactattct 450  
 gtcgaatacc agggggagta cgagagcctg tacacgagcc acatctggat 500  
 ccccgagcgc tgggtgctcac tcaactgaagg tctgtagtgt gatgtcactg 550  
 atgacatcac ggccactgtg ccatacaacc ttctgtgtcag ggccacattg 600  
 gggtcacaga cctcagcctg gagcatcctg aagcatccct ttaatagaaa 650  
 ctcaaccatc cttaccgcac ctgggatgga gatcaccaaa gatggcttcc 700  
 acctggttat tgagctggag gacctggggc ccagtttga gttccttgtg 750  
 goctactgga ggagggagcc tgggtccgag gaacatgtca aaatggtgag 800  
 gagtgggggt attccagtgc acctagaaac catggagcca ggggctgcat 850

actgtgtgaa ggcccagaca ttcgtgaagg ccattgggag gtacagcgcc 900  
 ttcagccaga cagaatgtgt ggaggtgcaa ggagaggcca ttcccttgg 950  
 actggccctg tttgcctttg ttggcttcat gctgacctt gtggtcgtgc 1000  
 cactgttcgt ctggaatg ggccggtgc tccagtaact ctgttgcctc 1050  
 gtggtggtcc tccagacac ctgaaaata accaattcac ccagaaagt 1100  
 aatcagctgc agaaggag aggtggatgc ctgtgccacg gctgtgatgt 1150  
 ctctgagga actcctcagg gctggatct cataggtttg cggaaaggcc 1200  
 caggtgaagc cgagaacctg gtctgcatga catggaacc atgaggggac 1250  
 aagttgtgtt tctgttttcc gccacggaca agggatgaga gaagtaggaa 1300  
 gagcctgttg tctacaagtc tagaagcaac catcagaggc aggggtgttt 1350  
 gtctaacaga acaactgact aggccttaggg gatgtgacct ctgactggg 1400  
 ggctgccact tgctggctga gcaaccctgg gaaaagtgc ttcatccctt 1450  
 cggctctaag ttttctcatc tgtaatggg gaattaccta cacacctgct 1500  
 aaacacacac acacagagtc tctctctata tatacacacg tacacataaa 1550  
 tacacccagc acttgaagg ctgaggggaa actggtgaca ctctacagtc 1600  
 tgactgattc agtgtttctg gagagcagga cataaatgta tgatgagaat 1650  
 gatcaaggac tctacacact gggtggcttg gagagccac ttccagaa 1700  
 taatccttga gagaaga atcatgggag caatgtgtt gagttcactt 1750  
 caagccaat gccggtgcag aggggaatg cttagcgagc tctacagtag 1800  
 gtgacctgga ggaaggtcac agccacactg aaaatgggat gtgcatgaac 1850  
 acggaggatc catgaactac tgtaaagtgt tgacagtgtg tgcacactgc 1900  
 agacagcagg tgaaatgtat gtgtgcaatg cgacgagaat gcagaagtca 1950  
 gtaacatgtg catgtttgtt gtgctcctt tttctgttg taaagtacag 2000  
 aattcagcaa ataaaaagg ccaccctggc caaaagcgg taaaaaaa 2050  
 aaaaaa 2056

<210> 183  
 <211> 311  
 <212> PRT  
 <213> Homo sapiens  
  
 <220>  
 <221> Signal peptide  
 <222> 1-29  
 <223> Signal peptide  
  
 <220>  
 <221> N-glycosylation sites  
 <222> 40-43, 134-137

<223> N-glycosylation sites.

<220>

<221> Tissue factor proteins homology

<222> 92-119

<223> Tissue factor proteins homology

<220>

<221> Transmembrane domain

<222> 230-255

<223> Transmembrane domain

<220>

<221> Integrins alpha chain protein homology

<222> 232-262

<223> Integrins alpha chain protein homology

<400> 183

Met	Gln	Thr	Thr	Met	Val	Leu	Glu	Glu	Ile	Trp	Thr	Ser	Leu
1				5				10					15
Phe	Met	Trp	Phe	Phe	Tyr	Ala	Leu	Ile	Pro	Cys	Leu	Leu	Thr
				20					25				30
Glu	Val	Ala	Ile	Leu	Pro	Ala	Pro	Gln	Asn	Leu	Ser	Val	Leu
				35					40				45
Thr	Asn	Met	Lys	His	Leu	Leu	Met	Trp	Ser	Pro	Val	Ile	Ala
				50					55				60
Gly	Glu	Thr	Val	Tyr	Tyr	Ser	Val	Glu	Tyr	Gln	Gly	Glu	Tyr
				65					70				75
Ser	Leu	Tyr	Thr	Ser	His	Ile	Trp	Ile	Pro	Ser	Ser	Trp	Cys
				80					85				90
Leu	Thr	Glu	Gly	Pro	Glu	Cys	Asp	Val	Thr	Asp	Asp	Ile	Thr
				95					100				105
Thr	Val	Pro	Tyr	Asn	Leu	Arg	Val	Arg	Ala	Thr	Leu	Gly	Ser
				110					115				120
Thr	Ser	Ala	Trp	Ser	Ile	Leu	Lys	His	Pro	Phe	Asn	Arg	Asn
				125					130				135
Thr	Ile	Leu	Thr	Arg	Pro	Gly	Met	Glu	Ile	Thr	Lys	Asp	Gly
				140					145				150
His	Leu	Val	Ile	Glu	Leu	Glu	Asp	Leu	Gly	Pro	Gln	Phe	Glu
				155					160				165
Leu	Val	Ala	Tyr	Trp	Arg	Arg	Glu	Pro	Gly	Ala	Glu	Glu	His
				170					175				180
Lys	Met	Val	Arg	Ser	Gly	Gly	Ile	Pro	Val	His	Leu	Glu	Thr
				185					190				195
Glu	Pro	Gly	Ala	Ala	Tyr	Cys	Val	Lys	Ala	Gln	Thr	Phe	Val
				200					205				210
Ala	Ile	Gly	Arg	Tyr	Ser	Ala	Phe	Ser	Gln	Thr	Glu	Cys	Val
				215					220				225



Val	Gln	Gly	Glu	Ala	Ile	Pro	Leu	Val	Leu	Ala	Leu	Phe	Ala	Phe
				230					235					240
Val	Gly	Phe	Met	Leu	Ile	Leu	Val	Val	Val	Pro	Leu	Phe	Val	Trp
				245					250					255
Lys	Met	Gly	Arg	Leu	Leu	Gln	Tyr	Ser	Cys	Cys	Pro	Val	Val	Val
				260					265					270
Leu	Pro	Asp	Thr	Leu	Lys	Ile	Thr	Asn	Ser	Pro	Gln	Lys	Leu	Ile
				275					280					285
Ser	Cys	Arg	Arg	Glu	Glu	Val	Asp	Ala	Cys	Ala	Thr	Ala	Val	Met
				290					295					300
Ser	Pro	Glu	Glu	Leu	Leu	Arg	Ala	Trp	Ile	Ser				
				305					310					

<210> 184  
 <211> 808  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 654, 711, 748  
 <223> unknown base

<400> 184  
 tcctgctgat gcacatctgg gtttggcaaa aggaggttgc ttcgagccgc 50  
 cttttctagc ttcttggcgc gctctagaac aattcaggct tcgctgcgac 100  
 tagacctcag ctccaacata tgcattctga agaaagatgg ctgagatgac 150  
 agaattgcttt attttggaaa gaaacaatgt tctaggtcaa actgagtcta 200  
 ccaaatgcag actttcacaa tggttctaga agaaatctgg acaagtcttt 250  
 tcatgtgggtt ttctacgca ttgattccat gtttgcctac agatgaagtg 300  
 gccattctgc ctgcccctca gaacctctct gtactctcaa ccaacatgaa 350  
 gcatctcttg atgtggagcc cagtgatcgc gcttgagaaa acagtgtact 400  
 attctgtcga ataccagggg gactacgaga gctgtacac gagccacatc 450  
 tggatcccca gcagctgggt ctcactcaact gaaggtcctg agtgtgatgt 500  
 cactgatgac atcacggcca ctgtgccata caacctttgt gtcagggccca 550  
 cattggggctc acagacctca gcttgagaga tctgaagca tccctttaat 600  
 agaaactcaa ccatccttac cggacctggg atggagatca ccaagatgg 650  
 cttncacctg gttattgagc tggaggacct ggggccccag tttgagtcc 700  
 ttgtggccta ntggaggagg ggcgaacccc ttgcggcgca aggggttngc 750  
 gaaccctctg cggccgtctg ggtatctctc gagaaaagag aggcccaata 800  
 tgacccac 808

<210> 185  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 185  
aggcttcgct gcgactagac ctc 23

<210> 186  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 186  
ccaggctcggg taaggatggt tgag 24

<210> 187  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 187  
tttctacgca ttgattccat gtttgctcac agatgaagtg gccattctgc 50

<210> 188  
<211> 1227  
<212> DNA  
<213> Homo sapiens

<400> 188  
cggacgcgtg ggccgccacc tccggaacaa gccatggtgg cggcgacggt 50  
ggcagcggcg tggctgctcc tgtgggctgc ggcctgcgcg cagcaggagc 100  
aggacttcta cgaattcaag gcggtcaaca tccggggcaa actggtgtcg 150  
ctggagaagt acgcgggatc ggtgtcctg gtggtgaatg tggccagcga 200  
gtgcggcttc acagaccagc actaccgagc cctgcagcag ctgcagcgag 250  
acctggggccc ccaccacttt aacgtgctcg ccttcccctg caaccagttt 300  
ggccaacagg agcctgacag caacaaggag attgagagct ttgccgcgg 350  
cacctacagt gtctcattcc ccattgttag caagattgca gtcaccggta 400  
ctggtgccca tcttgccttc aagtacctgg ccagacttc tgggaaggag 450  
cccacctgga acttctggaa gtacctagta gccccagatg gaaagtggt 500  
aggggcttgg gacccaactg tgtcagtgga ggaggtcaga cccagatca 550  
cagcgctcgt gaggaagctc atcctactga agcgagaaga cttataacca 600

ccgcgtctcc tctccacca cctcatcccg cccacctgtg tggggctgac 650  
 caatgcaaac tcaaatggtg cttcaaaggg agagacccac tgactctcct 700  
 tcctttactc ttatgccatt ggtcccatca ttcttgtggg ggaaaaatcc 750  
 tagtattttg attatttgaa tcttacagca acaaatagga actcctggcc 800  
 aatgagagct cttgaccagt gaatcaccag cgcatacgaa cgtcttgcca 850  
 acaaaaatgt gtggcaaata gaagtatatc aagcaataat ctcccaccca 900  
 aggcttctgt aaactgggac caatgattac ctcatagggc tgttgtgagg 950  
 attaggatga aatacctgtg aaagtgccta ggcagtgcga gccaaatagg 1000  
 aggcattcaa tgaacatttt ttgcatataa accaaaaaat aacttgttat 1050  
 caataaaaaa ttgcatccaa catgaatttc cagccgatga taatccaggc 1100  
 caaagggtta gttgttgta tttctctgt attattttct tcattacaaa 1150  
 agaaatgcaa gttcattgta acaatccaaa caatacctca cgatataaaa 1200  
 taaaaatgaa agtatcctcc tcaaaaa 1227

<210> 189  
 <211> 187  
 <212> PRT  
 <213> Homo sapiens

<400> 189  
 Met Val Ala Ala Thr Val Ala Ala Ala Trp Leu Leu Leu Trp Ala  
 1 5 10 15  
 Ala Ala Cys Ala Gln Gln Glu Gln Asp Phe Tyr Asp Phe Lys Ala  
 20 25 30  
 Val Asn Ile Arg Gly Lys Leu Val Ser Leu Glu Lys Tyr Arg Gly  
 35 40 45  
 Ser Val Ser Leu Val Val Asn Val Ala Ser Glu Cys Gly Phe Thr  
 50 55 60  
 Asp Gln His Tyr Arg Ala Leu Gln Gln Leu Gln Arg Asp Leu Gly  
 65 70 75  
 Pro His His Phe Asn Val Leu Ala Phe Pro Cys Asn Gln Phe Gly  
 80 85 90  
 Gln Gln Glu Pro Asp Ser Asn Lys Glu Ile Glu Ser Phe Ala Arg  
 95 100 105  
 Arg Thr Tyr Ser Val Ser Phe Pro Met Phe Ser Lys Ile Ala Val  
 110 115 120  
 Thr Gly Thr Gly Ala His Pro Ala Phe Lys Tyr Leu Ala Gln Thr  
 125 130 135  
 Ser Gly Lys Glu Pro Thr Trp Asn Phe Trp Lys Tyr Leu Val Ala  
 140 145 150  
 Pro Asp Gly Lys Val Val Gly Ala Trp Asp Pro Thr Val Ser Val

155 160 165  
 Glu Glu Val Arg Pro Gln Ile Thr Ala Leu Val Arg Lys Leu Ile  
 170 175 180  
 Leu Leu Lys Arg Glu Asp Leu  
 185

<210> 190  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 190  
 gcaggacttc tacgacttca aggc 24

<210> 191  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 191  
 agtctgggcc aggtacttga aggc 24

<210> 192  
 <211> 50  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 192  
 caacatccgg ggcaaaactgg tgtcgctgga gaagtaccgc ggcgcggtgt 50

<210> 193  
 <211> 2187  
 <212> DNA  
 <213> Homo sapiens

<400> 193  
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 acgtcgggat gctgcgcctg gggaggctgt gcgcggggag ctgggggtg 100  
 ctggggggccc gggccgcctt ctctcgaggt tggcaggaag ccaggttgca 150  
 ggggtgtccg ttctcagtt ccagagaggt ggcgcgcgtg gtctccacgc 200  
 ccacgcggagg cctcagctac gttcaggggg gcacccaaaa gcattttaac 250  
 agcaagactg tggggcagtg cctggagacc acagcacaga ggggtcccaga 300  
 acgagaggcc ttgggtgttc tccatgaaga cgtcaggttg acctttgccc 350  
 aactcaagga ggagggtggac aaagctgctt ctggcctcct gagcattggc 400

ctctgcaaag gtgaccggct gggcatgtgg ggacctaaact cctatgcatg 450  
 ggtgctcatg cagttggcca cggcccaggc gggcatcatt ctgggtctctg 500  
 tgaacccagc ctaccaggct atggaactgg agtatgtcct caagaagggt 550  
 ggctgcaagg cccttgtgtt cccaagcaa ttcaagacc agcaatacta 600  
 caacgtcctg aagcagatct gtccagaagt ggagaatgcc cagccagggg 650  
 ccttgaagag tcagaggctc ccagatctga ccacagtcac ctcggtggat 700  
 gcccccttgc cggggaccct gctcctggat gaagtgggtg cggctggcag 750  
 cacacggcag catctggacc agctccaata caaccagcag ttcctgtcct 800  
 gccatgaccc catcaacatc cagttcacct cggggacaac aggcagcccc 850  
 aagggggcca ccctctccca ctacaacatt gtcaacaact ccaacatttt 900  
 aggagagcgc ctgaaactgc atgagaagac accagagcag ttgcggatga 950  
 tcctgcccaa cccctgtac cattgcctgg gttccgtggc aggcacaatg 1000  
 atgtgtctga tgtacgggtc caccctcatc ctggcctctc ccatttcaa 1050  
 tggcaagaag gcaactggagg ccatcagcag agagagaggc accttctctg 1100  
 atgggtacccc cagcatgttc gtggacatto tgaaccagcc agacttctcc 1150  
 agttatgaca tctcgacatc gtgtggaggt gtcattgctg ggccccctgc 1200  
 acctccagag ttgatccgag ccatcatcaa caagataaat atgaaggacc 1250  
 tgggtggtgc ttatggaacc acagagaaca gtcccgtgac attcgcgcac 1300  
 ttcctgagg acaactgtga gcagaaggca gaaagcgtgg gcagaattat 1350  
 gcctcacacg gaggcccgga tcatgaacat ggaggcaggc acgctggcaa 1400  
 agctgaacac gcccggggag ctgtgcatcc gaggtactg cgtcatgctg 1450  
 ggctaactgg gtgagcctca gaagacagag gaagcagtgg atcaggacaa 1500  
 gtggtattgg acagagatg tcgccaat gaatgagcag ggcttctgca 1550  
 agatcgtggg ccgctctaag gatgatga tccgggggtg tgagaacatc 1600  
 taccocgcag agctcgagga cttctttcac acacaccga aggtgcagga 1650  
 agtgcagggt gtgggagtga aggacgatcg gatgggggaa gagatttgtg 1700  
 cctgcattcg gctgaaggac ggggaggaga ccacggtgga ggagataaaa 1750  
 gctttctgca aagggaagat ctctcacttc aagattccga agtacatcgt 1800  
 gtttgtcaca aactaccccc tcaccatttc aggaagatc cagaaattca 1850  
 aacttcgaga gcagatggaa cgacatctaa atctgtgaat aaagcagcag 1900  
 gcctgtcctg gccggttggc ttgactctct cctgtcagaa tgcaacctgg 1950  
 ctttatgcac ctagatgtcc ccagcaccca gttctgagcc aggcacatca 2000

aatgtcaagg aattgactga acgaactaag agctcctgga tgggtccggg 2050  
 aactgcgctg gccacaaggt gccaaaaggc aggcagcctg cccaggccct 2100  
 ccctcctgtc catcccccac attccctctgt ctgtccttgt gatttggcat 2150  
 aaagagcttc tgttttcttt gaaaaaaaaa aaaaaa 2187

<210> 194  
 <211> 615  
 <212> PRT  
 <213> Homo sapiens

<400> 194  
 Met Ala Val Tyr Val Gly Met Leu Arg Leu Gly Arg Leu Cys Ala  
 1 5 10 15  
 Gly Ser Ser Gly Val Leu Gly Ala Arg Ala Ala Leu Ser Arg Ser  
 20 25 30  
 Trp Gln Glu Ala Arg Leu Gln Gly Val Arg Phe Leu Ser Ser Arg  
 35 40 45  
 Glu Val Asp Arg Met Val Ser Thr Pro Ile Gly Gly Leu Ser Tyr  
 50 55 60  
 Val Gln Gly Cys Thr Lys Lys His Leu Asn Ser Lys Thr Val Gly  
 65 70 75  
 Gln Cys Leu Glu Thr Thr Ala Gln Arg Val Pro Glu Arg Glu Ala  
 80 85 90  
 Leu Val Val Leu His Glu Asp Val Arg Leu Thr Phe Ala Gln Leu  
 95 100 105  
 Lys Glu Glu Val Asp Lys Ala Ala Ser Gly Leu Leu Ser Ile Gly  
 110 115 120  
 Leu Cys Lys Gly Asp Arg Leu Gly Met Trp Gly Pro Asn Ser Tyr  
 125 130 135  
 Ala Trp Val Leu Met Gln Leu Ala Thr Ala Gln Ala Gly Ile Ile  
 140 145 150  
 Leu Val Ser Val Asn Pro Ala Tyr Gln Ala Met Glu Leu Glu Tyr  
 155 160 165  
 Val Leu Lys Lys Val Gly Cys Lys Ala Leu Val Phe Pro Lys Gln  
 170 175 180  
 Phe Lys Thr Gln Gln Tyr Tyr Asn Val Leu Lys Gln Ile Cys Pro  
 185 190 195  
 Glu Val Glu Asn Ala Gln Pro Gly Ala Leu Lys Ser Gln Arg Leu  
 200 205 210  
 Pro Asp Leu Thr Thr Val Ile Ser Val Asp Ala Pro Leu Pro Gly  
 215 220 225  
 Thr Leu Leu Leu Asp Glu Val Val Ala Ala Gly Ser Thr Arg Gln  
 230 235 240  
 His Leu Asp Gln Leu Gln Tyr Asn Gln Gln Phe Leu Ser Cys His

245	250	255
Asp Pro Ile Asn Ile Gln Phe Thr Ser	Gly Thr Thr Gly Ser	Pro
260	265	270
Lys Gly Ala Thr Leu Ser His Tyr Asn	Ile Val Asn Asn Ser Asn	
275	280	285
Ile Leu Gly Glu Arg Leu Lys Leu His	Glu Lys Thr Pro Glu Gln	
290	295	300
Leu Arg Met Ile Leu Pro Asn Pro Leu	Tyr His Cys Leu Gly Ser	
305	310	315
Val Ala Gly Thr Met Met Cys Leu Met	Tyr Gly Ala Thr Leu Ile	
320	325	330
Leu Ala Ser Pro Ile Phe Asn Gly Lys	Lys Ala Leu Glu Ala Ile	
335	340	345
Ser Arg Glu Arg Gly Thr Phe Leu Tyr	Gly Thr Pro Thr Met Phe	
350	355	360
Val Asp Ile Leu Asn Gln Pro Asp Phe	Ser Ser Tyr Asp Ile Ser	
365	370	375
Thr Met Cys Gly Gly Val Ile Ala Gly	Ser Pro Ala Pro Pro Glu	
380	385	390
Leu Ile Arg Ala Ile Ile Asn Lys Ile	Asn Met Lys Asp Leu Val	
395	400	405
Val Ala Tyr Gly Thr Thr Glu Asn Ser	Pro Val Thr Phe Ala His	
410	415	420
Phe Pro Glu Asp Thr Val Glu Gln Lys	Ala Glu Ser Val Gly Arg	
425	430	435
Ile Met Pro His Thr Glu Ala Arg Ile	Met Asn Met Glu Ala Gly	
440	445	450
Thr Leu Ala Lys Leu Asn Thr Pro Gly	Glu Leu Cys Ile Arg Gly	
455	460	465
Tyr Cys Val Met Leu Gly Tyr Trp Gly	Glu Pro Gln Lys Thr Glu	
470	475	480
Glu Ala Val Asp Gln Asp Lys Trp Tyr	Trp Thr Gly Asp Val Ala	
485	490	495
Thr Met Asn Glu Gln Gly Phe Cys Lys	Ile Val Gly Arg Ser Lys	
500	505	510
Asp Met Ile Ile Arg Gly Gly Glu Asn	Ile Tyr Pro Ala Glu Leu	
515	520	525
Glu Asp Phe Phe His Thr His Pro Lys	Val Gln Glu Val Gln Val	
530	535	540
Val Gly Val Lys Asp Asp Arg Met Gly	Glu Glu Ile Cys Ala Cys	
545	550	555
Ile Arg Leu Lys Asp Gly Glu Glu Thr	Thr Val Glu Glu Ile Lys	

560	565	570
Ala Phe Cys Lys Gly Lys Ile Ser His Phe Lys Ile Pro Lys Tyr		
575	580	585
Ile Val Phe Val Thr Asn Tyr Pro Leu Thr Ile Ser Gly Lys Ile		
590	595	600
Gln Lys Phe Lys Leu Arg Glu Gln Met Glu Arg His Leu Asn Leu		
605	610	615

<210> 195  
 <211> 642  
 <212> DNA  
 <213> Homo sapiens

<400> 195  
 caactccaac attttaggag agcgectgaa actgcatgag aagacaccag 50  
 agcagttgag gatgatcctg cccaaccccc tgtaccattg cctgggttcc 100  
 gtggcaggca caatgatgtg tctgatgtac ggtgccacco tcactctggc 150  
 ctctcccatc ttcaatggca agaaggcact ggaggccatc agcagagaga 200  
 gaggcacctt cctgtatggt acccccacga tggtcgtgga cattctgaac 250  
 cagccagact tctccagtta tgacatctcg accatgtgtg gaggtgtcat 300  
 tgctgggtcc cctgcacctc cagagttgat cagagccatc atcaacaaga 350  
 taaatatgaa ggacctgtgt gttgcttatg gaaccacaga gaacagtccc 400  
 gtgacattcg cgcacttccc tgaggacact gtggagcaga aggcagaaaag 450  
 cgtgggcaga attatgcctc acacggaggc cgggatcatg aacatggagg 500  
 cagggacgct ggcaaaactg aacacgcccg gggagctgtg catccgaggg 550  
 tactgcgtca tgctgggcta ctggggtgag cctcagaaga cagaggaagc 600  
 agtggatcag gacaagtgtt attggacagg agatgtcgcc ac 642

<210> 196  
 <211> 1575  
 <212> DNA  
 <213> Homo sapiens

<400> 196  
 gagcaggagc gagccatgga ccccgccagg aaagcagggtg cccaggccat 50  
 gatctggact gcaggctggc tgctgctgct gctgcttcgc ggaggagcgc 100  
 aggcctctgga gtgctacagc tgcgtgcaga aagcagatga cggatgctcc 150  
 ccgaacaaga tgaagacagt gaagtgcgcg cggggcgttg acgtctgcac 200  
 cgaggccgtg ggggcggttg agaccatcca cggacaatto tcgctggcag 250  
 tgcggggttg cggttcgga ctcccggga agaataccg cggcctggat 300  
 cttcacgggc ttctggcggt catccagctg cagcaatgcg ctcaggatcg 350



ctgcaacgcc aagctcaacc tcacctgcgc ggcgctcgac ccggcaggta 400  
 atgagagtgc ataccgccc aacggcggtg agtgctacag ctgtgtgggc 450  
 ctgagccggg aggcgtgccca gggtagatcg ccgccggtcg tgagctgcta 500  
 caacgccagc gatcatgtct acaagggtcg cttegacggc aacgtcacct 550  
 tgacggcagc taatgtgact gtgtccttgc ctgtccgggg ctgtgtccag 600  
 gatgaattct gcactcggga tggagtaaca gggccagggt tcacgtcgag 650  
 tggctcctgt tgccagggtt cccgtgtaa ctctgacctc cgcaacaaga 700  
 cctacttctc cctcgaatc ccaccccttg tccggctgcc cctccagag 750  
 cccacgactg tggcctcaac cacatctgtc accactteta cctcgccccc 800  
 agtgagacc acatccacca ccaaaccat gccagcgcca accagtcaga 850  
 ctccgagaca gggagtagaa caogaggcct ccgggatga ggagccagg 900  
 ttgactggag gcgcgctg gcaccaggac cgcagcaatt cagggcagta 950  
 tcctgcaaaa ggggggcccc agcagcccca taataaagc tgtgtggctc 1000  
 ccacagctgg attggcagcc cttctgttgg ccgtggctgc tgggttccta 1050  
 ctgtgagctt ctccacctgg aaatttccct ctccactact tctctggccc 1100  
 tgggtacccc tcttctcctc acttctgtt cccaccactg gactgggctg 1150  
 gcccgcccc tgtttttcca acattcccca gtatccccag cttctgtgc 1200  
 gctggtttgc ggctttggga aataaaatac cggtgtatat attctgccag 1250  
 ggggtgtcta gctttttgag gacagctcct gtatccttct catcctgtc 1300  
 tctccgcttg tcctcttgtg atgttaggac agagtgcagc aagtcagctg 1350  
 tcacggggaa ggtgagagag aggatgctaa gcttcctact cactttctcc 1400  
 tagccagcct ggaatttga gcgtggggtg ggtgggacaa tggctcccca 1450  
 ctctaagcac tgctccccc actcccgca tctttgggga atcggttccc 1500  
 catatgtctt ccttactaga ctgtgagctc ctcgaggggg ggccgggtac 1550  
 ccaattcgcc ctatagtgc tcgta 1575

<210> 197  
 <211> 346  
 <212> PRT  
 <213> Homo sapiens

<400> 197  
 Met Asp Pro Ala Arg Lys Ala Gly Ala Gln Ala Met Ile Trp Thr  
 1 5 10 15  
 Ala Gly Trp Leu Leu Leu Leu Leu Arg Gly Gly Ala Gln Ala  
 20 25 30  
 Leu Glu Cys Tyr Ser Cys Val Gln Lys Ala Asp Asp Gly Cys Ser

	35	40	45
Pro Asn Lys Met	Lys Thr Val Lys Cys	Ala Pro Gly Val Asp	Val
	50	55	60
Cys Thr Glu Ala	Val Gly Ala Val Glu	Thr Ile His Gly Gln Phe	
	65	70	75
Ser Leu Ala Val	Arg Gly Cys Gly Ser	Gly Leu Pro Gly Lys Asn	
	80	85	90
Asp Arg Gly Leu	Asp Leu His Gly Leu	Leu Ala Phe Ile Gln Leu	
	95	100	105
Gln Gln Cys Ala	Gln Asp Arg Cys Asn	Ala Lys Leu Asn Leu Thr	
	110	115	120
Ser Arg Ala Leu	Asp Pro Ala Gly Asn	Glu Ser Ala Tyr Pro	Pro
	125	130	135
Asn Gly Val Glu	Cys Tyr Ser Cys Val	Gly Leu Ser Arg Glu Ala	
	140	145	150
Cys Gln Gly Thr	Ser Pro Pro Val Val	Ser Cys Tyr Asn Ala Ser	
	155	160	165
Asp His Val Tyr	Lys Gly Cys Phe Asp	Gly Asn Val Thr Leu Thr	
	170	175	180
Ala Ala Asn Val	Thr Val Ser Leu Pro	Val Arg Gly Cys Val Gln	
	185	190	195
Asp Glu Phe Cys	Thr Arg Asp Gly Val	Thr Gly Pro Gly Phe Thr	
	200	205	210
Leu Ser Gly Ser	Cys Cys Gln Gly Ser	Arg Cys Asn Ser Asp Leu	
	215	220	225
Arg Asn Lys Thr	Tyr Phe Ser Pro Arg	Ile Pro Pro Leu Val Arg	
	230	235	240
Leu Pro Pro Pro	Glu Pro Thr Thr Val	Ala Ser Thr Thr Ser Val	
	245	250	255
Thr Thr Ser Thr	Ser Ala Pro Val Arg	Pro Thr Ser Thr Thr Lys	
	260	265	270
Pro Met Pro Ala	Pro Thr Ser Gln Thr	Pro Arg Gln Gly Val Glu	
	275	280	285
His Glu Ala Ser	Arg Asp Glu Glu Pro	Arg Leu Thr Gly Gly Ala	
	290	295	300
Ala Gly His Gln	Asp Arg Ser Asn Ser	Gly Gln Tyr Pro Ala Lys	
	305	310	315
Gly Gly Pro Gln	Gln Pro His Asn Lys	Gly Cys Val Ala Pro Thr	
	320	325	330
Ala Gly Leu Ala	Ala Leu Leu Leu Ala	Val Ala Ala Gly Val Leu	
	335	340	345

Leu

<210> 198  
 <211> 1657  
 <212> DNA  
 <213> Homo sapiens

<400> 198  
 cgggactcgg cgggtcctcc tgggagtctc ggaggggacc ggctgtgcag 50  
 acgcoatgga gttggtgctg gtcttctctc gcagcctgct ggcocccatg 100  
 gtctcggcca gtgcagctga aaaggagaag gaaatggacc cttttcatta 150  
 tgattaccag accctgagga ttgggggact ggtgttcgct gtggctcctc 200  
 tctcgggttg gatcctcctt atcctaagtc gcaggtgcaa gtgcagtttc 250  
 aatcagaagc cccggggccc aggagatgag gaagcccagg tggagaacct 300  
 catcacccgc aatgcaacag agccccagaa gcagagaact gaagtgcagc 350  
 catcaggtag aagcctctgg aacctgaggc ggctgcttga acctttgatg 400  
 gcaaatgtcg atgcttaaga aaaccggcca cttcagcaac agccctttcc 450  
 ccaggagaag ccaagaactt gtgtgtcccc caccctatcc cctctaacac 500  
 cattcctcca cctgatgatg caactaacac ttgcctcccc actgcagcct 550  
 gcggtcctgc ccacctcccg tgatgtgtgt gtgtgtgtgt gtgtgtgact 600  
 gtgtgtgttt gctaactgtg gtctttgttg ctactgtttt gtggatggta 650  
 ttgtgtttgt tagtgaactg tggactcgct ttcccaggca ggggctgagc 700  
 cacatggcca tctgctcctc cctgcccccg tggccctcca tcaccttctg 750  
 ctctaggag gtgctttgtt gcccagagac agcccccctc cctgatttag 800  
 ggatgcgtag ggtaagagca cgggcagtag tcttcagtcg tcttgggacc 850  
 tgggaagggt tgacgacctt tgtcatcatt cttcatggac tccttctoact 900  
 cctttaacaa aaaccttgct tccttatccc acctgatccc agtctgaagg 950  
 tctcttagca actggagata caaagcaagg agctggtgag cccagcgttg 1000  
 acgtcaggca ggctatgccc ttccgtggtt aattttcttc cagggggttc 1050  
 cacgaggagt ccccatctgc ccgcgccctt cacagagcgc cgggggattc 1100  
 caggccaggc gcttctactc tgcccctggg gaatgtgtcc cctgcataac 1150  
 ttctcagcaa taactccatg ggctctggga ccctaaccct tccaaacctc 1200  
 cctgcttctg agacttcaat ctacagccca gctcatccag atgcagacta 1250  
 cagtccctgc aattgggtct ctggcaggca atagttgaag gactcctgtt 1300  
 ccgttggggc cagcaccccg ggatggatgg agggagagca gaggcctttg 1350  
 cttctctgcc tacgtccctt tagatgggca gcagaggcaa ctccccgac 1400

ctttgctctg cctgtcgggtg gtcagagcgg tgagcggaggt gggttggaga 1450  
 ctcagcaggc tccgtgcagc ccttggaac agtgagaggt tgaaggtcat 1500  
 aacgagagtg ggaactcaac ccagatccc cccctcctgt cctctgtgtt 1550  
 cccgcggaaa ccaaccaaac cgtgcgtgt gaccattgc tgttctctgt 1600  
 atcgtgatct atcctcaaca acaacagaaa aaaggaataa aatatacttt 1650  
 gtttcct 1657

<210> 199  
 <211> 120  
 <212> PRT  
 <213> Homo sapiens

<400> 199  
 Met Glu Leu Val Leu Val Phe Leu Cys Ser Leu Leu Ala Pro Met  
 1 5 10 15  
 Val Leu Ala Ser Ala Ala Glu Lys Glu Lys Glu Met Asp Pro Phe  
 20 25 30  
 His Tyr Asp Tyr Gln Thr Leu Arg Ile Gly Gly Leu Val Phe Ala  
 35 40 45  
 Val Val Leu Phe Ser Val Gly Ile Leu Leu Ile Leu Ser Arg Arg  
 50 55 60  
 Cys Lys Cys Ser Phe Asn Gln Lys Pro Arg Ala Pro Gly Asp Glu  
 65 70 75  
 Glu Ala Gln Val Glu Asn Leu Ile Thr Ala Asn Ala Thr Glu Pro  
 80 85 90  
 Gln Lys Gln Arg Thr Glu Val Gln Pro Ser Gly Gly Ser Leu Trp  
 95 100 105  
 Asn Leu Arg Arg Leu Leu Glu Pro Leu Asp Ala Asn Val Asp Ala  
 110 115 120

<210> 200  
 <211> 415  
 <212> DNA  
 <213> Homo sapiens

<400> 200  
 aaacttgacg ccatgaagat cccggtcctt cctgccgtgg tgctcctctc 50  
 cctcctgggtg ctccactctg cccaggggag caccctgggt ggtcctgagg 100  
 aagaaagcac cattgagaat tatgcgtcac gaccogaggc ctttaacacc 150  
 ccgttctctga acatogacaa attgcgatct gcgtttaagg ctgatgatgt 200  
 cctgaactgg cagccctct ttgagtctat caaaaggaaa cttcctttcc 250  
 tcaactggga tgcctttcct aagctgaaag gactgaggag cgcaactcct 300  
 gatgcccagt gaccatgacc tccactggaa gagggggcta gcgtgagcgc 350  
 tgattctcaa cctaccataa ctctttcctg cctcaggaac tccaataaaa 400

cattttccat ccaaa 415

<210> 201

<211> 99

<212> PRT

<213> Homo sapiens

<400> 201

Met	Lys	Ile	Pro	Val	Leu	Pro	Ala	Val	Val	Leu	Leu	Ser	Leu	Leu
1				5					10					15
Val	Leu	His	Ser	Ala	Gln	Gly	Ala	Thr	Leu	Gly	Gly	Pro	Glu	Glu
				20					25					30
Glu	Ser	Thr	Ile	Glu	Asn	Tyr	Ala	Ser	Arg	Pro	Glu	Ala	Phe	Asn
				35					40					45
Thr	Pro	Phe	Leu	Asn	Ile	Asp	Lys	Leu	Arg	Ser	Ala	Phe	Lys	Ala
				50					55					60
Asp	Glu	Phe	Leu	Asn	Trp	His	Ala	Leu	Phe	Glu	Ser	Ile	Lys	Arg
				65					70					75
Lys	Leu	Pro	Phe	Leu	Asn	Trp	Asp	Ala	Phe	Pro	Lys	Leu	Lys	Gly
				80					85					90
Leu	Arg	Ser	Ala	Thr	Pro	Asp	Ala	Gln						
				95										

<210> 202

<211> 678

<212> DNA

<213> Homo sapiens

<400> 202

cagttctgaa atcaatggag ttaatttagg gaatacaaac cagccatggg 50  
ggtggagatt gcctttgcct cagtatttct cacctgcctc tcccttctgg 100  
cagcaggagt ctcccagggt gttcttctcc agccagttcc aactcaggag 150  
acaggtccca aggccatggg agatctctcc tgtggtttg ccggccactc 200  
atgagagtgt ttttgtgtaa agtatTTTTT agaatactgt tgactctctc 250  
atgatttaac aaccatcctt tgcgaagttt tatgaggctt taggggaatg 300  
tcaaccctca aatttttgtt atactagatg gcttcattt acccaccact 350  
attttaaggc ccttttatTT ttagtgtcaa ggttcatttg acttgagaaa 400  
gtgcccttct gcagcttcat tgattttgtt tatcttcact attaattgta 450  
acgattaaaa aagaataaga gcacgcagac ctctaggaga atattttatc 500  
cctgggtgcc cctgacacat ttatgtagt atccccaaaa tgtgattgtt 550  
aattttaaag ttattctaat attagtacat tcagttgtga tgtaatatga 600  
ataaccagaa tctatttctt aaaagtttt agtatatttt tcaactagat 650  
atttgtatag aaagactgaa tagtgatg 678

<210> 203  
 <211> 52  
 <212> PRT  
 <213> Homo sapiens

<400> 203  
 Met Gly Val Glu Ile Ala Phe Ala Ser Val Ile Leu Thr Cys Leu  
           1                  5                  10                  15  
 Ser Leu Leu Ala Ala Gly Val Ser Gln Val Val Leu Leu Gln Pro  
                   20                  25                  30  
 Val Pro Thr Gln Glu Thr Gly Pro Lys Ala Met Gly Asp Leu Ser  
                   35                  40                  45  
 Cys Gly Phe Ala Gly His Ser  
                   50

<210> 204  
 <211> 1917  
 <212> DNA  
 <213> Homo sapiens

<400> 204  
 ggggaatctg cagtaggtct gccggcgatg gagtgtgtgg ctagctcgcc 50  
 gcttcggctc tggctgctgt tgttcctcct gccctcagcg caggggccgcc 100  
 agaaggagtc aggttcaaaa tggaaagtat ttattgacca aattaacagg 150  
 tctttggaga attacgaacc atgttcaagt caaaactgca gctgctacca 200  
 tgggtgcata gaagaggatc taactccttt ccgaggaggc atctccagga 250  
 agatgatggc agaggtagtc agacggaagc tagggacca ctatcagatc 300  
 actaagaaca gactgtaccg ggaaaatgac tgcattgttc cctcaagggt 350  
 tagtggtgtt gagcacttta ttttggaagt gatcgggctg ctccctgaca 400  
 tggagatggt gatcaatgta cgagattatc ctccaggttc taaatggatg 450  
 gagcctgcc tcccagtcct ctccctcagt aagacatcag agtaccatga 500  
 tatcatgtat cctgcttga catcttggga agggggacct gctgtttggc 550  
 caatttatcc tacaggctct ggacggtggg acctcttcag agaagatctg 600  
 gtaaggctcag cagcacagtg gccatggaaa aagaaaaact ctacagcata 650  
 ttcccgagga tcaaggacaa gtccagaacg agatcctctc attctctctg 700  
 ctcggaaaaa cccaaaactt gttgatgcag aatacaccaa aaaccaggcc 750  
 tggaaatcta tgaaagatac cttaggaaag ccagctgcta aggatgtcca 800  
 tcttgtggat cactgcaaat acaagtatct gtttaatttt cgaggcgtag 850  
 ctgcaagttt ccggtttaaa cacctcttcc tgttgtgctc acttgttttc 900  
 catgttggtg atgagtggtc agaattcttc tatccacago tgaagccatg 950  
 ggttcactat atcccgatca aaacagatct ctccaatgto caagagctgt 1000

tacaatttgt aaaagcaaat gatgatgtag ctcaagagat tgctgaaagg 1050  
 ggaagccagt ttattaggaa ccatttgcag atggatgaca tcacctgtta 1100  
 ctgggagaac ctcttgagt aataactctaa attcctgtct tataatgtaa 1150  
 cgagaaggaa aggttatgat caaattattc ccaaaatggt gaaaactgaa 1200  
 ctatagtagt catcatagga ccatagtcct ctttggggca acagatctca 1250  
 gatatoctac ggtgagaagc ttaccataag cttggctcct ataccttgaa 1300  
 tatctgctat caagccaaat acctggtttt cttatcatg ctgcaaccag 1350  
 agcaactott gagaagatt taaaatgtgt ctaatacact gatatgaagc 1400  
 agttcaactt tttggatgaa taaggaccag aaatcgtgag atgtggattt 1450  
 tgaacccaac tctaccttc attttcttaa gaccaatcac agcttgtgcc 1500  
 tcagatcatc cacctgtgtg agtccatcac tgtgaaattg actgtgtcca 1550  
 tgtgatgatg ccctttgtcc cattatttgg agcagaaaaa tcgtcatttg 1600  
 gaagtagtac aactcattgc tggaaattgt aaattattca aggcgtgac 1650  
 tctgtcactt tattttaatg taggaaaccc tatgggggtt atgaaaaata 1700  
 cttggggatc attctctgaa tggcttaagg aagcggtagc catgccatgc 1750  
 aatgatgtag gagttctctt ttgtaaaacc ataaactctg ttactcagga 1800  
 ggtttctata atgccacata gaaagaggcc aattgcatga gtaattattg 1850  
 caattggatt tcagggtccc tttttgtgcc ttoatgccct acttcttaat 1900  
 gcctctctaa agccaaa 1917

<210> 205  
 <211> 392  
 <212> PRT  
 <213> Homo sapiens

<400> 205  
 Met Glu Trp Trp Ala Ser Ser Pro Leu Arg Leu Trp Leu Leu Leu  
 1 5 10 15  
 Phe Leu Leu Pro Ser Ala Gln Gly Arg Gln Lys Glu Ser Gly Ser  
 20 25 30  
 Lys Trp Lys Val Phe Ile Asp Gln Ile Asn Arg Ser Leu Glu Asn  
 35 40 45  
 Tyr Glu Pro Cys Ser Ser Gln Asn Cys Ser Cys Tyr His Gly Val  
 50 55 60  
 Ile Glu Glu Asp Leu Thr Pro Phe Arg Gly Gly Ile Ser Arg Asn  
 65 70 75  
 Met Met Ala Glu Val Val Arg Arg Lys Leu Gly Thr His Tyr Gln  
 80 85 90  
 Ile Thr Lys Asn Arg Leu Tyr Arg Glu Asn Asp Cys Met Phe Pro

	95	100	105
Ser Arg Cys Ser	Gly Val Glu His Phe	Ile Leu Glu Val Ile	Gly
	110	115	120
Arg Leu Pro Asp	Met Glu Met Val Ile	Asn Val Arg Asp Tyr Pro	
	125	130	135
Gln Val Pro Lys	Trp Met Glu Pro Ala	Ile Pro Val Phe Ser	Phe
	140	145	150
Ser Lys Thr Ser	Glu Tyr His Asp Ile	Met Tyr Pro Ala Trp Thr	
	155	160	165
Phe Trp Glu Gly	Gly Pro Ala Val Trp	Pro Ile Tyr Pro Thr	Gly
	170	175	180
Leu Gly Arg Trp	Asp Leu Phe Arg Glu	Asp Leu Val Arg Ser	Ala
	185	190	195
Ala Gln Trp Pro	Trp Lys Lys Lys Asn	Ser Thr Ala Tyr Phe	Arg
	200	205	210
Gly Ser Arg Thr	Ser Pro Glu Arg Asp	Pro Leu Ile Leu Leu	Ser
	215	220	225
Arg Lys Asn Pro	Lys Leu Val Asp Ala	Glu Tyr Thr Lys Asn	Gln
	230	235	240
Ala Trp Lys Ser	Met Lys Asp Thr Leu	Gly Lys Pro Ala Ala	Lys
	245	250	255
Asp Val His Leu	Val Asp His Cys Lys	Tyr Lys Tyr Leu Phe	Asn
	260	265	270
Phe Arg Gly Val	Ala Ala Ser Phe Arg	Phe Lys His Leu Phe	Leu
	275	280	285
Cys Gly Ser Leu	Val Phe His Val Gly	Asp Glu Trp Leu Glu	Phe
	290	295	300
Phe Tyr Pro Gln	Leu Lys Pro Trp Val	His Tyr Ile Pro Val	Lys
	305	310	315
Thr Asp Leu Ser	Asn Val Gln Glu Leu	Leu Gln Phe Val Lys	Ala
	320	325	330
Asn Asp Asp Val	Ala Gln Glu Ile Ala	Glu Arg Gly Ser Gln	Phe
	335	340	345
Ile Arg Asn His	Leu Gln Met Asp Asp	Ile Thr Cys Tyr Trp	Glu
	350	355	360
Asn Leu Leu Ser	Glu Tyr Ser Lys Phe	Leu Ser Tyr Asn Val	Thr
	365	370	375
Arg Arg Lys Gly	Tyr Asp Gln Ile Ile	Pro Lys Met Leu Lys	Thr
	380	385	390
Glu Leu			

<210> 206



<211> 1425  
 <212> DNA  
 <213> Homo sapiens

<400> 206  
 caccctccca ttctctgcca tggccctctg actgtctctg atccctgctg 50  
 cctctgcctc ttctactctg gcctttggca ccggagtggg gttctgtcgc 100  
 tttaacctcc ttccggcaact tcttggaggg atcccgagggt ctgggtgtcc 150  
 ggatgccgcg cagggatggc tggctgccct gcaggaccgc agcatcctg 200  
 cccccctggc atgggatctg gggctcctg ttctatttgt tgggcagcac 250  
 agcctcatgg cagctgaaag agtgaaggca tggacatccc ggtactttgg 300  
 ggtccttcag aggtcaactgt atgtggcctg cactgccctg gccttgacgc 350  
 tgggtgatgcg gtactgggag ccataccca aaggccctgt gttgtgggag 400  
 gctcgggctg agccatgggc cactgggtg ccgtctctct gctttgtgct 450  
 ccatgtcacc tcttggtctc tcactctttg cactctctct gcttttgact 500  
 atgtctgagct catgggcctc aaacagggtat actaccatgt gctggggctg 550  
 ggcgagcctc tggccctgaa gtctccccgc gctctcagac tcttctccca 600  
 cctgcgcacc ccagtgtgtg tggagctgct gacagtgtg tgggtgtgtc 650  
 ctaccctggg caggacacct ctctcctctg ctttctctct taccctctac 700  
 ctgggccttg ctccagggtc tgatcagcaa gacctccgt acctccgggc 750  
 ccagctacaa agaaaaactc acctgctctc tcggccccag gatggggagg 800  
 cagagtgtgg agctcactct ggttacaagc cctgtttctc ctctccact 850  
 gaattctaaa tccttaacat ccaggccctg gctgcttcat gccagaggcc 900  
 caaatccatg gaotgaagga gatgccctt ctaactactg agactttatt 950  
 ctctgggtcc agctccatc cctaaattct gagttoagc cactgaactc 1000  
 caaggtccac ttctaccag caaggaagag tggggtatgg aagtcatctg 1050  
 tcccttcact gtttagagca tgacactctc cccctcaaca gcctctgag 1100  
 aaggaaagga tctgccctga ccactccctt ggcactgita cttgcctctg 1150  
 cgctcagggt gtccccctct gcaccgttg cttccactcc aagaaggtgg 1200  
 accagggtct gcaagttcaa cggtcatagc tgtccctcca ggccccaacc 1250  
 ttgctcacc actccgggc ctagtctctg cactctctta ggccctgcct 1300  
 ctgggtctag accccaacct agtcaagggt attctctctg tcttaactcg 1350  
 atgacttggg gctccctgct ctcccgagga agatgctctg caggaaaaata 1400  
 aaagtcagcc ttttctctaa aaaaa 1425

<210> 207  
 <211> 262  
 <212> PRT  
 <213> Homo sapiens

<400> 207  
 Met Ala Pro Ala Leu Leu Leu Ile Pro Ala Ala Leu Ala Ser Phe  
 1 5 10 15  
 Ile Leu Ala Phe Gly Thr Gly Val Glu Phe Val Arg Phe Thr Ser  
 20 25 30  
 Leu Arg Pro Leu Leu Gly Gly Ile Pro Glu Ser Gly Gly Pro Asp  
 35 40 45  
 Ala Arg Gln Gly Trp Leu Ala Ala Leu Gln Asp Arg Ser Ile Leu  
 50 55 60  
 Ala Pro Leu Ala Trp Asp Leu Gly Leu Leu Leu Phe Val Gly  
 65 70 75  
 Gln His Ser Leu Met Ala Ala Glu Arg Val Lys Ala Trp Thr Ser  
 80 85 90  
 Arg Tyr Phe Gly Val Leu Gln Arg Ser Leu Tyr Val Ala Cys Thr  
 95 100 105  
 Ala Leu Ala Leu Gln Leu Val Met Arg Tyr Trp Glu Pro Ile Pro  
 110 115 120  
 Lys Gly Pro Val Leu Trp Glu Ala Arg Ala Glu Pro Trp Ala Thr  
 125 130 135  
 Trp Val Pro Leu Leu Cys Phe Val Leu His Val Ile Ser Trp Leu  
 140 145 150  
 Leu Ile Phe Ser Ile Leu Leu Val Phe Asp Tyr Ala Glu Leu Met  
 155 160 165  
 Gly Leu Lys Gln Val Tyr Tyr His Val Leu Gly Leu Gly Glu Pro  
 170 175 180  
 Leu Ala Leu Lys Ser Pro Arg Ala Leu Arg Leu Phe Ser His Leu  
 185 190 195  
 Arg His Pro Val Cys Val Glu Leu Leu Thr Val Leu Trp Val Val  
 200 205 210  
 Pro Thr Leu Gly Thr Asp Arg Leu Leu Leu Ala Phe Leu Leu Thr  
 215 220 225  
 Leu Tyr Leu Gly Leu Ala His Gly Leu Asp Gln Gln Asp Leu Arg  
 230 235 240  
 Tyr Leu Arg Ala Gln Leu Gln Arg Lys Leu His Leu Leu Ser Arg  
 245 250 255  
 Pro Gln Asp Gly Glu Ala Glu  
 260

<210> 208  
 <211> 2095  
 <212> DNA

<213> Homo sapiens

<400> 208

ccgagcacag gagattgcct gcgttttaga ggtggctgcg ttgtgggaaa 50  
agctatcaag gaagaaattg ccaaaccatg tcttttttct tgttttcaga 100  
gtagttcaca acagatctga gtgttttaata taagcatgga atacagaaaa 150  
caacaaaaaa cttaagcttt aatttcactc ggaaatccac agttttctta 200  
gtcccttgga cccggttgac ctgttggtc ttcccgctgg ctgctctatc 250  
acgtggtgct ctccgactac tcaccccgag tgtaaagaac cttcggctcg 300  
cgtgcttctg agctgctgtg gatggcctcg gctctctgga ctgctctcc 350  
gagtaggatg toactgagat cctcaaatg gagcctcctg ctgctgtcac 400  
tctgagttt ctttgtgatg tggtaacctc gccttcccca ctacaatggt 450  
atagaacgcg tgaactggat gtactttctat gagtatgagc cgatttacag 500  
acaagacttt cacttcacac ttccgagagca ttcaaatgct tctcatcaaa 550  
atccatttct ggtcattctg gtgacctccc acccttcaga tgtgaaagcc 600  
aggcaggcca ttagagttac ttgggggtgaa aaaaagtctt ggtggggata 650  
tgaggttctt acatttttct tattaggcca agagggtgaa aaggaagaca 700  
aaatgttggc attgtcctta gaggatgaac accttcttta tggtgacata 750  
atccgacaag attttttaga cacatataat aacctgacct tgaaaacct 800  
tatggcattc aggtgggtaa ctgagttttg ccccaatgcc aagtacgtaa 850  
tgaagacaga cactgatgtt ttcataata ctggcaattt agtgaagat 900  
cttttaaac taaaccactc agagaagttt ttcacagggt atcctctaata 950  
tgataattat tccatagag gattttacca aaaaacctat atttcttacc 1000  
aggagtatcc tttcaaggtg ttcctcccat actgcagtgg gttgggttat 1050  
ataatgtcca gagatttggt gccaaaggatc tatgaaatga tgggtcacgt 1100  
aaaaccatc aagtttgaag atgtttatgt cgggatctgt ttgaatttat 1150  
taaaagtga cattcatatt ccagaagaca caaatctttt ctttctatat 1200  
agaatcoatt tggatgtctg tcaactgaga cgtgtgattg cagcccatgg 1250  
cttttcttcc aaggagatca tcactttttg gcaggtcatt ctaaggaaca 1300  
ccacatgcca ttattaactt cacattctac aaaaagccta gaaggacagg 1350  
ataccttggt gaaagtgtta aataaagtag gtactgtgga aaattcatgg 1400  
ggaggtcagt gtgctggctt acactgaact gaaactcatg aaaaaccag 1450  
actggagact ggagggttac acttggtgatt tattagtcag gcccttcaaa 1500

gatgatatgt ggaggaatta aatataaagg aattggaggt ttttgctaaa 1550  
 gaaattaata ggaccaaaca atttgacat gtcattctgt agactagaat 1600  
 ttcttaaaag ggtgttactg agttataagc tcactaggct gtaaaaacaa 1650  
 aacaatgtag agttttattt attgaacaat gtagtcactt gaaggttttg 1700  
 tgtatatott atgtggatta ccaatttaa aatatatgta gttctgtgtc 1750  
 aaaaaacttc ttactgaag ttatactgaa caaaatttta cctgtttttg 1800  
 gtcatttata aagtacttca agatgttgca gtatttcaca gttattatta 1850  
 tttaaaatta cttcaacttt gtgtttttaa atgttttgac gatttcaata 1900  
 caagataaaa aggatagtga atcattcttt acatgcaaac attttccagt 1950  
 tacttaactg atcagtttat tattgataca tcactccatt aatgtaaagt 2000  
 cataggtcat tattgcatat cagtaatctc ttggactttg ttaaatattt 2050  
 tactgtggtg atatagagaa gaattaaagc aagaaaatct gaaaa 2095

<210> 209  
 <211> 331  
 <212> PRT  
 <213> Homo sapiens

<400> 209  
 Met Ala Ser Ala Leu Trp Thr Val Leu Pro Ser Arg Met Ser Leu 15  
 1 5 10  
 Arg Ser Leu Lys Trp Ser Leu Leu Leu Leu Ser Leu Leu Ser Phe 30  
 20 25  
 Phe Val Met Trp Tyr Leu Ser Leu Pro His Tyr Asn Val Ile Glu 45  
 35 40  
 Arg Val Asn Trp Met Tyr Phe Tyr Glu Tyr Glu Pro Ile Tyr Arg 60  
 50 55  
 Gln Asp Phe His Phe Thr Leu Arg Glu His Ser Asn Cys Ser His 75  
 65 70  
 Gln Asn Pro Phe Leu Val Ile Leu Val Thr Ser His Pro Ser Asp 90  
 80 85  
 Val Lys Ala Arg Gln Ala Ile Arg Val Thr Trp Gly Glu Lys Lys 105  
 95 100  
 Ser Trp Trp Gly Tyr Glu Val Leu Thr Phe Phe Leu Leu Gly Gln 120  
 110 115  
 Glu Ala Glu Lys Glu Asp Lys Met Leu Ala Leu Ser Leu Glu Asp 135  
 125 130  
 Glu His Leu Leu Tyr Gly Asp Ile Ile Arg Gln Asp Phe Leu Asp 150  
 140 145  
 Thr Tyr Asn Asn Leu Thr Leu Lys Thr Ile Met Ala Phe Arg Trp 165  
 155 160

Val	Thr	Glu	Phe	Cys	Pro	Asn	Ala	Lys	Tyr	Val	Met	Lys	Thr	Asp	
				170					175					180	
Thr	Asp	Val	Phe	Ile	Asn	Thr	Gly	Asn	Leu	Val	Lys	Tyr	Leu	Leu	
				185					190					195	
Asn	Leu	Asn	His	Ser	Glu	Lys	Phe	Phe	Thr	Gly	Tyr	Pro	Leu	Ile	
				200					205					210	
Asp	Asn	Tyr	Ser	Tyr	Arg	Gly	Phe	Tyr	Gln	Lys	Thr	His	Ile	Ser	
				215					220					225	
Tyr	Gln	Glu	Tyr	Pro	Phe	Lys	Val	Phe	Pro	Pro	Tyr	Cys	Ser	Gly	
				230					235					240	
Leu	Gly	Tyr	Ile	Met	Ser	Arg	Asp	Leu	Val	Pro	Arg	Ile	Tyr	Glu	
				245					250					255	
Met	Met	Gly	His	Val	Lys	Pro	Ile	Lys	Phe	Glu	Asp	Val	Tyr	Val	
				260					265					270	
Gly	Ile	Cys	Leu	Asn	Leu	Leu	Lys	Val	Asn	Ile	His	Ile	Pro	Glu	
				275					280					285	
Asp	Thr	Asn	Leu	Phe	Phe	Leu	Tyr	Arg	Ile	His	Leu	Asp	Val	Cys	
				290					295					300	
Gln	Leu	Arg	Arg	Val	Ile	Ala	Ala	His	Gly	Phe	Ser	Ser	Lys	Glu	
				305					310					315	
Ile	Ile	Thr	Phe	Trp	Gln	Val	Met	Leu	Arg	Asn	Thr	Thr	Cys	His	
				320					325					330	

Tyr

<210> 210  
 <211> 745  
 <212> DNA  
 <213> Homo sapiens

<400> 210  
 cctctgtcca ctgctttcgt gaagacaaga tgaagttcac aattgtcttt 50  
 gtggtgacttc ttggagtctt tctagtcct gccctagcta actataatat 100  
 caacgtcaat gatgacaaca acaatgctgg aagtgggcag cagtcagtga 150  
 gtgtcaacaa tgaacacaat gtggccaatg ttgacaataa caacggatgg 200  
 gactcctgga attccatctg ggattatgga aatggctttg ctgcaaccag 250  
 actotttcaa aagaagacat gcattgtgca caaaatgaac aaggaagtca 300  
 tgcctcccat tcaatccctt gatgcactgg tcaaggaaaa gaagcttcag 350  
 ggtaagggac caggaggacc acctccaag ggcctgatgt actcagtcaa 400  
 cccaaacaaa gtgatgacc tgagcaagtt cggaaaaaac attgcaacaa 450  
 tgtgtcgtgg gattccaaca tacatggctg aggagatgca agaggcaagc 500  
 ctgttttttt actcaggaaac gtgtcacacg accagtgtac tatggattgt 550

ggacatttcc ttctgtggag acacggtgga gaactaaaca attttttaa 600  
gccactatgg atttagtcat ctgaatatgc tgtgcagaaa aaatatgggc 650  
tccagtgggtt ttaccatgt cattctgaaa tttttctcta ctagtattgt 700  
ttgattttctt taagtttcaa taaaatcatt tagcattgaa aaaaa 745

<210> 211  
<211> 185  
<212> PRT  
<213> Homo sapiens

<400> 211  
Met Lys Phe Thr Ile Val Phe Ala Gly Leu Leu Gly Val Phe Leu  
1 5 10 15  
Ala Pro Ala Leu Ala Asn Tyr Asn Ile Asn Val Asn Asp Asp Asn  
20 25 30  
Asn Asn Ala Gly Ser Gly Gln Gln Ser Val Ser Val Asn Asn Glu  
35 40 45  
His Asn Val Ala Asn Val Asp Asn Asn Asn Gly Trp Asp Ser Trp  
50 55 60  
Asn Ser Ile Trp Asp Tyr Gly Asn Gly Phe Ala Ala Thr Arg Leu  
65 70 75  
Phe Gln Lys Lys Thr Cys Ile Val His Lys Met Asn Lys Glu Val  
80 85 90  
Met Pro Ser Ile Gln Ser Leu Asp Ala Leu Val Lys Glu Lys Lys  
95 100 105  
Leu Gln Gly Lys Gly Pro Gly Gly Pro Pro Lys Gly Leu Met  
110 115 120  
Tyr Ser Val Asn Pro Asn Lys Val Asp Asp Leu Ser Lys Phe Gly  
125 130 135  
Lys Asn Ile Ala Asn Met Cys Arg Gly Ile Pro Thr Tyr Met Ala  
140 145 150  
Glu Glu Met Gln Glu Ala Ser Leu Phe Phe Tyr Ser Gly Thr Cys  
155 160 165  
Tyr Thr Thr Ser Val Leu Trp Ile Val Asp Ile Ser Phe Cys Gly  
170 175 180  
Asp Thr Val Glu Asn  
185

<210> 212  
<211> 1706  
<212> DNA  
<213> Homo sapiens

<400> 212  
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tacagaagta tattaacttt ttaggagtaa tttctagttt ggattgtaat 100

atgaaataat ttaaaagggc ttcgctcata tataggaaaa tcgcatatgg 150  
 tcctagtatt aaattcttat tgcttactga tttttttgag ttaagagttg 200  
 ttatatgcta gaatatgagg atgtgaatat aaataagaga agaaaaaaga 250  
 ataaagtaga ttgagttccc aattttatgt aagcttcaga agaactgggtt 300  
 tgtttacatg caagcttata gttgaaatat ttttcaggaa ttacatgaat 350  
 gacagtcttc gaaccaatgt gtttggtcga ttccaaccag agactatagc 400  
 atgtgcttgc atctaccttg cagctagagc acttcagatt ccgttgccaa 450  
 ctctgcccc a ttggtttctt ctttttggta ctacagaaga ggaatccag 500  
 gaaatctgca tagaaacact taggctttat accagaaaaa agccaaacta 550  
 tgaattactg gaaaaagaag tagaaaaaag aaagtaggcc ttacaagaag 600  
 ccaaattaaa agcaaaggga ttgaatccgg atggaactcc agccctttca 650  
 accctgggtg gatctttctc agcctccaag ccatcatcac caagagaagt 700  
 aaaagctgaa gagaaatcac caatctccat taatgtgaag acagtcaaaa 750  
 aagaacctga ggatagacaa caggcttcca aaagccctta caatggtgta 800  
 agaaaagaca gcaagagaag tagaaatagc agaagtgcaa gtcgatcgag 850  
 gtcaagaaca cgatcacgtt ctgatcaca tactccaaga agacactata 900  
 ataataggcg gagtcgatct ggaacataca gctcgagatc aagaagcagg 950  
 tcccgcgatc acagtgaag cctcgaaga catcataatc atggttctcc 1000  
 tcaccttaag gccaaagcata ccagagatga tttaaaaagt tcaaacagac 1050  
 atggtcataa aaggaaaaaa tctcgttctc gatctcagag caagtctcgg 1100  
 gatcactcag atgcagccaa gaaacacagg catgaaaggg gacatcatag 1150  
 ggacaggcgt gaacgatctc gtcctttga gaggtcccat aaaagcaagc 1200  
 accatggtgg cagtgcgtca ggacatggca ggcacaggcg ctgactttct 1250  
 ctctcttga gctgcacata gttcttgggt ttgcttatct acagtgtgat 1300  
 gtatggactc aatcaaaaac attaaacgca aactgattag gatttgattt 1350  
 ctgaaaccc tctaggtctc tagaacactg aggacagttt cttttgaaa 1400  
 gaactatggt aatttttttg cacattaaaa tgccttagca gtatctaatt 1450  
 aaaaaccatg gtcagggtca attgtacttt attatagttg tgtattgttt 1500  
 attgctataa gaactggagc gtgaattctg taaaaatgta tcttattttt 1550  
 atacagataa aattgcagac actgttctat ttaagtgggt atttgtttaa 1600  
 atgatggtga atactttctt aacactgggt tgtctgcatg tgtaaagatt 1650  
 tttaacagga aataaaatc aaatcttgtt ttttcaaaaa aaaaaaaa 1700

aaaagt 1706

<210> 213

<211> 299

<212> PRT

<213> Homo sapiens

<400> 213

Met	Asn	Asp	Ser	Leu	Arg	Thr	Asn	Val	Phe	Val	Arg	Phe	Gln	Pro
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Glu	Thr	Ile	Ala	Cys	Ala	Cys	Ile	Tyr	Leu	Ala	Ala	Arg	Ala	Leu
				20					25					30
Gln	Ile	Pro	Leu	Pro	Thr	Arg	Pro	His	Trp	Phe	Leu	Leu	Phe	Gly
				35					40					45
Thr	Thr	Glu	Glu	Glu	Ile	Gln	Glu	Ile	Cys	Ile	Glu	Thr	Leu	Arg
				50					55					60
Leu	Tyr	Thr	Arg	Lys	Lys	Pro	Asn	Tyr	Glu	Leu	Leu	Glu	Lys	Glu
				65					70					75
Val	Glu	Lys	Arg	Lys	Val	Ala	Leu	Gln	Glu	Ala	Lys	Leu	Lys	Ala
				80					85					90
Lys	Gly	Leu	Asn	Pro	Asp	Gly	Thr	Pro	Ala	Leu	Ser	Thr	Leu	Gly
				95					100					105
Gly	Phe	Ser	Pro	Ala	Ser	Lys	Pro	Ser	Ser	Pro	Arg	Glu	Val	Lys
				110					115					120
Ala	Glu	Glu	Lys	Ser	Pro	Ile	Ser	Ile	Asn	Val	Lys	Thr	Val	Lys
				125					130					135
Lys	Glu	Pro	Glu	Asp	Arg	Gln	Gln	Ala	Ser	Lys	Ser	Pro	Tyr	Asn
				140					145					150
Gly	Val	Arg	Lys	Asp	Ser	Lys	Arg	Ser	Arg	Asn	Ser	Arg	Ser	Ala
				155					160					165
Ser	Arg	Ser	Arg	Ser	Arg	Thr	Arg	Ser	Arg	Ser	Arg	Ser	His	Thr
				170					175					180
Pro	Arg	Arg	His	Tyr	Asn	Asn	Arg	Arg	Ser	Arg	Ser	Gly	Thr	Tyr
				185					190					195
Ser	Ser	Arg	Ser	Arg	Ser	Arg	Ser	Arg	Ser	His	Ser	Glu	Ser	Pro
				200					205					210
Arg	Arg	His	His	Asn	His	Gly	Ser	Pro	His	Leu	Lys	Ala	Lys	His
				215					220					225
Thr	Arg	Asp	Asp	Leu	Lys	Ser	Ser	Asn	Arg	His	Gly	His	Lys	Arg
				230					235					240
Lys	Lys	Ser	Arg	Ser	Arg	Ser	Gln	Ser	Lys	Ser	Arg	Asp	His	Ser
				245					250					255
Asp	Ala	Ala	Lys	Lys	His	Arg	His	Glu	Arg	Gly	His	His	Arg	Asp
				260					265					270
Arg	Arg	Glu	Arg	Ser	Arg	Ser	Phe	Glu	Arg	Ser	His	Lys	Ser	Lys



His His Gly Gly Ser Arg Ser Gly His Gly Arg His Arg Arg  
 290 295

<210> 214

<211> 730

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 72-73, 85, 91, 127, 226, 268, 454, 484, 513, 566, 663

<223> unknown base

<400> 214

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 aggggtttat cattttttga anntattcgg gtcanaattg nctttgaaaa 100  
 gcattgcttt ttacagaaat atattanctt tttagagtaa tttctagtgtt 150  
 ggattgtaat atgaaattat ttaaaagggc ttcgctcata tataggaaaa 200  
 tcgcatatgg tcctagtatt aaattnttat tgcttactga tttttttgag 250  
 ttaagagttg ttatatgnta gaatatgagg atgtgaatat aaataagaga 300  
 agaaaaaaga ataaagtaga ttgagtcctc aattttatgt aagcttcaga 350  
 agaactgggt tgtttacatg caagcttata gttgaaatat ttttcaggaa 400  
 ttacatgaat gacagtcctc gaaccaatgt gttgttctga tttcaaccag 450  
 agantatagc atgtgcttgc atctaccttg cagntagagc acttcagatt 500  
 ccgttgccaa ctngtcccca ttggtttctt ctittttggta ctacagaaga 550  
 ggaaatccag gaaatntgca tagaaacact taggctttat accagaaaaa 600  
 agccaaacta tgaattactg gaaaaagaag tagaaaaaag aaaagtagcc 650  
 ttacaagaag ccnaattaaa agcaaaggga ttgaatccgg atggaactcc 700  
 agccctttca accctgggtg gattttctcc 730

<210> 215

<211> 1807

<212> DNA

<213> Homo sapiens

<400> 215

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 acgcgtcatg gcggtcctcg gactacagct ggtggtgacc ctgctcactg 100  
 ccacctcat gcacaggctg gcgccacact gctccttctgc gcgctggctg 150  
 ctctgtaacg gcagttttgt ccgatacaag caccctgtctg aggaggagct 200  
 tcgggccctg gcggggaagc cgaggccagc aggcaggaaa gagcggtggg 250  
 ccaatggcct tagtgaggag aagccactgt ctgtgccccc agatgccccg 300

ttccagctgg agacctgccc cctcacgacc gtggatgccc tggctctgcg 350  
 cttcttctctg gagtaccagt ggtttgtgga ctttgcgtgtg tactcgggcg 400  
 gcgtgtacct cttcacagag gctactact acatgctggg accagccaag 450  
 gagactaaca ttgctgtgtt ctggtgctcg ctcacggtga ctttctccat 500  
 caagatgttc ctgacagtga cacggctgta cttcagcgcc gaggaggggg 550  
 gtgagcgctc tgtctgcctc acctttgcct tcctcttctc gctgctggcc 600  
 atgctggtgc aagtgtgctg ggaggagacc ctcgagctgg gcctggagcc 650  
 tggctctggcc agcatgaccc agaactaga gccactctcg aagaagcagg 700  
 gctgggaactg ggcgcttctc gtggccaagc tggctatccg cgtgggaactg 750  
 gcagtgtgtg gctctgtgtg gggtgcttc ctcaccttcc caggctcgcg 800  
 gctggccag acccaccggg acgcaactgac catgtcggag gacagacca 850  
 tgtctgcatt cctcctgcac accagcttcc tgtctccct gttcactctg 900  
 tggctctgga caaagcccat tgcacgggac ttctcgcacc agccgcgctt 950  
 tggggagacg cgtttctccc tgtgtccga ttctgccttc gactctgggc 1000  
 gcctctggtt gctggtggtg ctgtgcctgc tgcggctggc ggtgaccccg 1050  
 ccccaactgc aggcctacct gtgcctggcc aaggcccggg tgagcagct 1100  
 gcgaaggag gctggccga tcgaagcccg tgaaatccag cagagggtgg 1150  
 tccgagtcta ctgctatgtg accgtggtga gcttgacga cctgacgccg 1200  
 ctcatctca cctcaactg cacactctg ctcaagacgc tggaggcta 1250  
 ttctggggc ctgggccag ctcctctact atccccgac ccactctcag 1300  
 ccagcgctgc cccatcgcc tctggggagg acgaagtcca gcagactga 1350  
 gcgcggattg ccggggccct gggtgccctg cttactcccc tcttctccg 1400  
 tggcgtcctg gcctacctca tctggtggac ggtgcctgc cagctgctcg 1450  
 ccagcctttt cggcctctac ttccaccagc acttgccagg ctcctagctg 1500  
 cctgcagacc ctcctggggc cctgaggtct gttcctgggg cagcgggaca 1550  
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 gcgggactcc cggcggttcc cttcaccaca gtgcctgacc cgcggcccc 1650  
 cttggagccc gagtttctgc ctcagaactg tctctctctg gccacgagc 1700  
 atgagggtcc cgaggccatt gtctccgaag cgtatgtgcc aggtttgagt 1750  
 ggcgagggtg atgctggtg ctcttctgaa caaataaagg agcatgccga 1800  
 tttttaa 1807

<210> 216

<211> 479  
 <212> PRT  
 <213> Homo sapiens

<400> 216

Met	Ala	Val	Leu	Gly	Val	Gln	Leu	Val	Val	Thr	Leu	Leu	Thr	Ala	
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Thr	Leu	Met	His	Arg	Leu	Ala	Pro	His	Cys	Ser	Phe	Ala	Arg	Trp	
				20					25					30	
Leu	Leu	Cys	Asn	Gly	Ser	Leu	Phe	Arg	Tyr	Lys	His	Pro	Ser	Glu	
				35					40					45	
Glu	Glu	Leu	Arg	Ala	Leu	Ala	Gly	Lys	Pro	Arg	Pro	Arg	Gly	Arg	
				50					55					60	
Lys	Glu	Arg	Trp	Ala	Asn	Gly	Leu	Ser	Glu	Glu	Lys	Pro	Leu	Ser	
				65					70					75	
Val	Pro	Arg	Asp	Ala	Pro	Phe	Gln	Leu	Glu	Thr	Cys	Pro	Leu	Thr	
				80					85					90	
Thr	Val	Asp	Ala	Leu	Val	Leu	Arg	Phe	Phe	Leu	Glu	Tyr	Gln	Trp	
				95					100					105	
Phe	Val	Asp	Phe	Ala	Val	Tyr	Ser	Gly	Gly	Val	Tyr	Leu	Phe	Thr	
				110					115					120	
Glu	Ala	Tyr	Tyr	Tyr	Met	Leu	Gly	Pro	Ala	Lys	Glu	Thr	Asn	Ile	
				125					130					135	
Ala	Val	Phe	Trp	Cys	Leu	Leu	Thr	Val	Thr	Phe	Ser	Ile	Lys	Met	
				140					145					150	
Phe	Leu	Thr	Val	Thr	Arg	Leu	Tyr	Phe	Ser	Ala	Glu	Glu	Gly	Gly	
				155					160					165	
Glu	Arg	Ser	Val	Cys	Leu	Thr	Phe	Ala	Phe	Leu	Phe	Leu	Leu	Leu	
				170					175					180	
Ala	Met	Leu	Val	Gln	Val	Val	Arg	Glu	Glu	Thr	Leu	Glu	Leu	Gly	
				185					190					195	
Leu	Glu	Pro	Gly	Leu	Ala	Ser	Met	Thr	Gln	Asn	Leu	Glu	Pro	Leu	
				200					205					210	
Leu	Lys	Lys	Gln	Gly	Trp	Asp	Trp	Ala	Leu	Pro	Val	Ala	Lys	Leu	
				215					220					225	
Ala	Ile	Arg	Val	Gly	Leu	Ala	Val	Val	Gly	Ser	Val	Leu	Gly	Ala	
				230					235					240	
Phe	Leu	Thr	Phe	Pro	Gly	Leu	Arg	Leu	Ala	Gln	Thr	His	Arg	Asp	
				245					250					255	
Ala	Leu	Thr	Met	Ser	Glu	Asp	Arg	Pro	Met	Leu	Gln	Phe	Leu	Leu	
				260					265					270	
His	Thr	Ser	Phe	Leu	Ser	Pro	Leu	Phe	Ile	Leu	Trp	Leu	Trp	Thr	
				275					280					285	
Lys	Pro	Ile	Ala	Arg	Asp	Phe	Leu	His	Gln	Pro	Pro	Phe	Gly	Glu	

290	295	300
Thr Arg Phe Ser Leu Leu Ser Asp Ser	Ala Phe Asp Ser Gly Arg	
305	310	315
Leu Trp Leu Leu Val Val Leu Cys Leu	Leu Arg Leu Ala Val Thr	
320	325	330
Arg Pro His Leu Gln Ala Tyr Leu Cys	Leu Ala Lys Ala Arg Val	
335	340	345
Glu Gln Leu Arg Arg Glu Ala Gly Arg	Ile Glu Ala Arg Glu Ile	
350	355	360
Gln Gln Arg Val Val Arg Val Tyr Cys	Tyr Val Thr Val Val Ser	
365	370	375
Leu Gln Tyr Leu Thr Pro Leu Ile Leu	Thr Leu Asn Cys Thr Leu	
380	385	390
Leu Leu Lys Thr Leu Gly Gly Tyr Ser	Trp Gly Leu Gly Pro Ala	
395	400	405
Pro Leu Leu Ser Pro Asp Pro Ser Ser	Ala Ser Ala Ala Pro Ile	
410	415	420
Gly Ser Gly Glu Asp Glu Val Gln Gln	Thr Ala Ala Arg Ile Ala	
425	430	435
Gly Ala Leu Gly Gly Leu Leu Thr Pro	Leu Phe Leu Arg Gly Val	
440	445	450
Leu Ala Tyr Leu Ile Trp Trp Thr Ala	Ala Cys Gln Leu Leu Ala	
455	460	465
Ser Leu Phe Gly Leu Tyr Phe His Gln	His Leu Ala Gly Ser	
470	475	

<210> 217  
 <211> 574  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 5, 146  
 <223> unknown base

<400> 217  
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 gctcactgcc accctcatgc acaggtggc gccacactgc tctctcgcgc 100  
 gctggctgct ctgtaacggc agtttgttcc gatacaagca cccgntttga 150  
 ggaggagctt cgggccctgg cggggaagcc gaggccaga ggcaggaaaag 200  
 agcggtagggc caatggcctt agtgaggaga agccactgtc tgtgccccga 250  
 gatgccccgt tccagctgga gacctgcccc ctcacgaccg tggatgccct 300  
 ggtcctgcgc ttcttctcgg agtaccagtg gtttgtggac tttgctgtgt 350

actcgggcgg cgtgtacctc ttcacagagg cctactacta catgctggga 400  
 ccagccaagg agactaacat tgctgtgttc tgggtcctgc tcacagtgc 450  
 cttctccatc aagatgttcc tgacagtgc acggctgtac ttcagcgccg 500  
 aggagggggg tgagcgctct gtctgcctca cctttgcctt cctcttctg 550  
 ctgctggcca tgctggtgca agcg 574

<210> 218  
 <211> 2571  
 <212> DNA  
 <213> Homo sapiens

<400> 218  
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 ttgtgatcta ctgattgtgg gggcatggca aggtttgctt aaaggagctt 150  
 ggctgggttg gcccttgta gctgacagaa ggtggcagg gagaatgcag 200  
 cacactgtct ggagaatgaa ggcgcttctg ttgctggtct tgccttggtt 250  
 cagtctgtct aactacattg acaatgtggg caacctgcac ttctgtatt 300  
 cagaactctg taaagggtgc tccactacg gcctgaccac agataggag 350  
 aggcgtctac aagatggctg tcacagcggc tgtgcgagcc tcacagccac 400  
 ggctccctcc ccagagggtt ctgcagctgc caccatctcc ttaatgacag 450  
 acgagcctgg cctagacaac cctgcctacg tgcctctggc agaggacggg 500  
 cagccagcaa tcagccagc ggactctggc cggagcaacc gaactagggc 550  
 acggcccttt gagagatcca ctattagaag cagatcattt aaaaaataa 600  
 atcgagcttt gagtgttctt cgaaggacaa agagcgggag tgcagttgcc 650  
 aacctgccc accagggcag ggaaaattct gaaaacacca ctgccctga 700  
 agtctttcca aggttgtagc acctgattcc agatggtgaa attaccagca 750  
 tcaagatcaa tcgagtagat ccagtgaaa gcctctctat taggctggtg 800  
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 acagaagttc cgcagcagga acaatggaca ggccccggat gcctacagac 1050  
 cccgagatga cagctttcat gtgattctca aaaaagtag ccccgaggag 1100  
 cagcttgtaa taaaactggt gcgcaagggt gatgagcctg gggttttcat 1150  
 cttcaatgtg ctggatggcg gtgtggcata tcgacatggt cagcttgagg 1200

agaatgaccg tgtgttagcc atcaatggac atgatcttcg atatggcagc 1250  
 ccagaaagtg cggtcatctt gattcaggcc agtgaaagac gtgttcacct 1300  
 cgtcgtgtcc cgccagggtc ggcagcggag ccoctgacato tttcaggag 1350  
 ccggctggaa cagcaatggc agctgggtccc cagggccagg ggagaggagc 1400  
 aacactccca agccctcca tctacaatt acttgcatg agaaggtggt 1450  
 aaatatccaa aaagacccc gtgaatctct cggcatgacc gtgcaggagg 1500  
 gagcatcaca tagagaatgg gatttgccca tctatgtcat cagtgttgag 1550  
 ccggaggag tcataagcag agatggaaga ataaaaacag gtgacatttt 1600  
 gttgaatgtg gatgggggtc aactgacaga ggtcagccg agtgaggagc 1650  
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 gtcaaagagt atgagcccca ggaagactgc agcagcccag cagccctgga 1750  
 ctccaaccac aacatggccc caccagtgca ctggtcccca tctgggtcca 1800  
 tgtggctgga attaccacgg tgcttgata actgtaaaga tattgtatta 1850  
 cgaagaaaca cagctggaag tctgggcttc tgcattgtag gaggttatga 1900  
 agaatacaat ggaacaaaac ctttttcat caaatccatt gttgaaggaa 1950  
 caccagcata caatgatgga agaattagat gtggtgatat tcttcttgct 2000  
 gtcaatggta gaagtacatc aggaatgata catgcttgct tgcaagact 2050  
 gctgaaagaa cttaaaggaa gaattactct aactattgtt tcttggcctg 2100  
 gcactttttt atagaatcaa tgatgggtca gaggaaaaca gaaaaatcac 2150  
 aaataggcta agaagttgaa acactatatt tatcttgta gtttttatat 2200  
 ttaaagaag aatacattgt aaaaatgtca gaaaagtat gatcatctaa 2250  
 tgaaagccag ttacacctca gaaaatatga ttccaaaaaa attaaaacta 2300  
 ctagtttttt ttcagtgtgg aggatttctc attactctac aacattgttt 2350  
 atattttttc tattcaataa aaagccctaa aacaactaaa atgattgatt 2400  
 tgtatacccc actgaattca agctgattta aatttaaaat ttggatatatg 2450  
 ctgaagtctg ccaagggtag attatggcca tttttaattt acagctaaaa 2500  
 tattttttta aatgcattgc tgagaaacgt tgctttcatc aaacaagaat 2550  
 aaatattttt cagaagttaa a 2571

<210> 219

<211> 632

<212> PRT

<213> Homo sapiens

<400> 219

Met Lys Ala Leu Leu Leu Val Leu Pro Trp Leu Ser Pro Ala

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Asn Tyr Ile Asp	Asn Val Gly Asn Leu	His Phe Leu Tyr Ser	Glu 30
	20	25	
Leu Cys Lys Gly	Ala Ser His Tyr Gly	Leu Thr Lys Asp Arg Lys	45
	35	40	
Arg Arg Ser Gln Asp	Gly Cys Pro Asp	Gly Cys Ala Ser Leu Thr	60
	50	55	
Ala Thr Ala Pro Ser	Pro Glu Val Ser	Ala Ala Thr Ile Ser	75
	65	70	
Leu Met Thr Asp	Glu Pro Gly Leu Asp	Asn Pro Ala Tyr Val Ser	90
	80	85	
Ser Ala Glu Asp	Gly Gln Pro Ala Ile	Ser Pro Val Asp Ser Gly	105
	95	100	
Arg Ser Asn Arg Thr	Arg Ala Arg Pro	Phe Glu Arg Ser Thr Ile	120
	110	115	
Arg Ser Arg Ser Phe	Lys Lys Ile Asn	Arg Ala Leu Ser Val Leu	135
	125	130	
Arg Arg Thr Lys Ser	Gly Ser Ala Val	Ala Asn His Ala Asp Gln	150
	140	145	
Gly Arg Glu Asn Ser	Glu Asn Thr Thr	Ala Pro Glu Val Phe Pro	165
	155	160	
Arg Leu Tyr His Leu	Ile Pro Asp Gly	Glu Ile Thr Ser Ile Lys	180
	170	175	
Ile Asn Arg Val Asp	Pro Ser Glu Ser	Leu Ser Ile Arg Leu Val	195
	185	190	
Gly Gly Ser Glu Thr	Pro Leu Val His	Ile Ile Ile Gln His Ile	210
	200	205	
Tyr Arg Asp Gly Val	Ile Ala Arg Asp	Gly Arg Leu Leu Pro Gly	225
	215	220	
Asp Ile Ile Leu Lys	Val Asn Gly Met	Asp Ile Ser Asn Val Pro	240
	230	235	
His Asn Tyr Ala Val	Arg Leu Leu Arg	Gln Pro Cys Gln Val Leu	255
	245	250	
Trp Leu Thr Val Met	Arg Glu Gln Lys	Phe Arg Ser Arg Asn Asn	270
	260	265	
Gly Gln Ala Pro Asp	Ala Tyr Arg Pro	Arg Asp Asp Ser Phe His	285
	275	280	
Val Ile Leu Asn Lys	Ser Ser Pro Glu	Glu Gln Leu Gly Ile Lys	300
	290	295	
Leu Val Arg Lys Val	Asp Glu Pro Gly	Val Phe Ile Phe Asn Val	315
	305	310	
Leu Asp Gly Gly Val	Ala Tyr Arg His	Gly Gln Leu Glu Glu Asn	

320	325	330
Asp Arg Val Leu	Ala Ile Asn Gly His	Asp Leu Arg Tyr Gly Ser
335	340	345
Pro Glu Ser Ala	Ala His Leu Ile Gln	Ala Ser Glu Arg Arg Val
350	355	360
His Leu Val Val	Ser Arg Gln Val Arg	Gln Arg Ser Pro Asp Ile
365	370	375
Phe Gln Glu Ala	Gly Trp Asn Ser Asn	Gly Ser Trp Ser Pro Gly
380	385	390
Pro Gly Glu Arg	Ser Asn Thr Pro Lys	Pro Leu His Pro Thr Ile
395	400	405
Thr Cys His Glu	Lys Val Val Asn Ile	Gln Lys Asp Pro Gly Glu
410	415	420
Ser Leu Gly Met	Thr Val Ala Gly Gly	Ala Ser His Arg Glu Trp
425	430	435
Asp Leu Pro Ile	Tyr Val Ile Ser Val	Glu Pro Gly Gly Val Ile
440	445	450
Ser Arg Asp Gly	Arg Ile Lys Thr Gly	Asp Ile Leu Leu Asn Val
455	460	465
Asp Gly Val Glu	Leu Thr Glu Val Ser	Arg Ser Glu Ala Val Ala
470	475	480
Leu Leu Lys Arg	Thr Ser Ser Ser Ile	Val Leu Lys Ala Leu Glu
485	490	495
Val Lys Glu Tyr	Glu Pro Gln Glu Asp	Cys Ser Ser Pro Ala Ala
500	505	510
Leu Asp Ser Asn	His Asn Met Ala Pro	Pro Ser Asp Trp Ser Pro
515	520	525
Ser Trp Val Met	Trp Leu Glu Leu Pro	Arg Cys Leu Tyr Asn Cys
530	535	540
Lys Asp Ile Val	Leu Arg Arg Asn Thr	Ala Gly Ser Leu Gly Phe
545	550	555
Cys Ile Val Gly	Gly Tyr Glu Glu Tyr	Asn Gly Asn Lys Pro Phe
560	565	570
Phe Ile Lys Ser	Ile Val Glu Gly Thr	Pro Ala Tyr Asn Asp Gly
575	580	585
Arg Ile Arg Cys	Gly Asp Ile Leu Leu	Ala Val Asn Gly Arg Ser
590	595	600
Thr Ser Gly Met	Ile His Ala Cys Leu	Ala Arg Leu Leu Lys Glu
605	610	615
Leu Lys Gly Arg	Ile Thr Leu Thr Ile	Val Ser Trp Pro Gly Thr
620	625	630
Phe Leu		



<210> 220  
 <211> 773  
 <212> DNA  
 <213> Homo sapiens

<400> 220  
 ccaaagtgat catttgaaaa agagatatcc acatcttcaa gccatataa 50  
 aggatagaag ctgcacaggg cagctttact tactccagca ccttcctctc 100  
 ccaggcaaat ggtgctgacc atctttggga tacaatctca tggatacag 150  
 gtttttaaca tcactagccc aagcaacaat ggtggaatg ttcaggagac 200  
 agtgacaatt gataatgaaa aaaataccgc catogttaac atccatgcag 250  
 gatcatgctc ttctaccaca atttttgact ataaacatgg ctacattgca 300  
 tccaggggtgc tctccgaag agcctgcttt atcctgaaga tggaccatca 350  
 gaacatccct cctctgaaca atctccaatg gtacatctat gagaacacag 400  
 ctctggacaa catgttctcc aacaaatata cctgggtcaa gtacaacct 450  
 ctggagtctc tgatcaaaga cgtggattgg ttctctgttg ggtcaccat 500  
 tgagaaatcc tgcaaacata tccctttgta taagggggaa gtgggtgaaa 550  
 acacacataa tgtcgggtgt ggaggctgtg caaaggctgg gctcctgggc 600  
 atcttgggaa ttccaatctg tgcagacatt catgtttagg atgattagcc 650  
 ctcttgtttt atcttttcaa agaaatacat ccttggttta cactcaaaa 700  
 tcaaatataa ttctttccca atgccccaac taattttgag attcagtcag 750  
 aaaatataaa tgctgtattt ata 773

<210> 221  
 <211> 184  
 <212> PRT  
 <213> Homo sapiens

<400> 221  
 Met Lys Ile Leu Val Ala Phe Leu Val Val Leu Thr Ile Phe Gly  
 1 5 10 15  
 Ile Gln Ser His Gly Tyr Glu Val Phe Asn Ile Ile Ser Pro Ser  
 20 25 30  
 Asn Asn Gly Gly Asn Val Gln Glu Thr Val Thr Ile Asp Asn Glu  
 35 40 45  
 Lys Asn Thr Ala Ile Val Asn Ile His Ala Gly Ser Cys Ser Ser  
 50 55 60  
 Thr Thr Ile Phe Asp Tyr Lys His Gly Tyr Ile Ala Ser Arg Val  
 65 70 75  
 Leu Ser Arg Arg Ala Cys Phe Ile Leu Lys Met Asp His Gln Asn  
 80 85 90

Ile Pro Pro Leu Asn Asn Leu Gln Trp Tyr Ile Tyr Glu Lys Gln  
95 100 105

Ala Leu Asp Asn Met Phe Ser Asn Lys Tyr Thr Trp Val Lys Tyr  
110 115 120

Asn Pro Leu Glu Ser Leu Ile Lys Asp Val Asp Trp Phe Leu Leu  
125 130 135

Gly Ser Pro Ile Glu Lys Leu Cys Lys His Ile Pro Leu Tyr Lys  
140 145 150

Gly Glu Val Val Glu Asn Thr His Asn Val Gly Ala Gly Gly Cys  
155 160 165

Ala Lys Ala Gly Leu Leu Gly Ile Leu Gly Ile Ser Ile Cys Ala  
170 175 180

Asp Ile His Val

<210> 222  
<211> 992  
<212> DNA  
<213> Homo sapiens

<400> 222  
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accacccag gcatggggct ccttgggctg ttctgcttgg ccgtgtgtgg 100  
tgccagcagc ttctccaagg cacgggagga agaaattacc cctgtgtgtct 150  
ccattgccta caaagtctct gaagttttcc ccaaaggccg ctgggtgtctc 200  
ataacctgct gtgcacccca gccaccaccg cccatcacct attcctctg 250  
tggaaccaag aacatcaagg tggccaagaa ggtggtgaag acccacgagc 300  
cggcctctct caacctcaac gtcacactca agtccagtcc agacctgtctc 350  
acctactctt gccggggctc ctccactca ggtgcccctg tggacagtgc 400  
caggctacag atgcactggg agctgtgtgtc caagccagtg tctgagctgc 450  
gggccaactt cactctgcag gacagagggg caggccccag ggtggagatg 500  
atctgccagg cgtctctggg cagcccacct atcaccaaca gctgatcgg 550  
gaaggatggg cagggtccacc tgcagcagag accatgccac aggcagcctg 600  
ccaacttctc ctctctgccg agccagacat cggactggtt ctgggtgccag 650  
gtgtcaaaaca acgccaatgt ccagcacagc gccctcacag tgggtcccc 700  
agtggtgtgac cagaagatgg aggactggca ggggtcccctg gagagcccca 750  
tccttgctct gccgtctac agggagcacc gccgtctgag tgaagaggag 800  
tttggggggt tcaggatagg gaatggggag gtcagaggac gcaaacgagc 850  
agccatgtag aatgaacctg ccagagagcc aagcacggca gaggactgca 900

ggccatcagc gtgcactggt cgtatttgga gttcatgcaa aatgagtgtg 950

ttttagctgc tcttgccaca aaaaaaaaaa aaaaaaaaaa aa 992

<210> 223

<211> 265

<212> PRT

<213> Homo sapiens

<400> 223

Met Gly Leu Pro Gly Leu Phe Cys Leu Ala Val Leu Ala Ala Ser  
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Ser Phe Ser Lys Ala Arg Glu Glu Glu Ile Thr Pro Val Val Ser  
20 25 30

Ile Ala Tyr Lys Val Leu Glu Val Phe Pro Lys Gly Arg Trp Val  
35 40 45

Leu Ile Thr Cys Cys Ala Pro Gln Pro Pro Pro Ile Thr Tyr  
50 55 60

Ser Leu Cys Gly Thr Lys Asn Ile Lys Val Ala Lys Lys Val Val  
65 70 75

Lys Thr His Glu Pro Ala Ser Phe Asn Leu Asn Val Thr Leu Lys  
80 85 90

Ser Ser Pro Asp Leu Leu Thr Tyr Phe Cys Arg Ala Ser Ser Thr  
95 100 105

Ser Gly Ala His Val Asp Ser Ala Arg Leu Gln Met His Trp Glu  
110 115 120

Leu Trp Ser Lys Pro Val Ser Glu Leu Arg Ala Asn Phe Thr Leu  
125 130 135

Gln Asp Arg Gly Ala Gly Pro Arg Val Glu Met Ile Cys Gln Ala  
140 145 150

Ser Ser Gly Ser Pro Pro Ile Thr Asn Ser Leu Ile Gly Lys Asp  
155 160 165

Gly Gln Val His Leu Gln Gln Arg Pro Cys His Arg Gln Pro Ala  
170 175 180

Asn Phe Ser Phe Leu Pro Ser Gln Thr Ser Asp Trp Phe Trp Cys  
185 190 195

Gln Ala Ala Asn Asn Ala Asn Val Gln His Ser Ala Leu Thr Val  
200 205 210

Val Pro Pro Gly Gly Asp Gln Lys Met Glu Asp Trp Gln Gly Pro  
215 220 225

Leu Glu Ser Pro Ile Leu Ala Leu Pro Leu Tyr Arg Ser Thr Arg  
230 235 240

Arg Leu Ser Glu Glu Glu Phe Gly Gly Phe Arg Ile Gly Asn Gly  
245 250 255

Glu Val Arg Gly Arg Lys Ala Ala Ala Met  
260 265

<210> 224  
<211> 1297  
<212> DNA  
<213> Homo sapiens

<400> 224  
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ctctcttttg tatgacatca ccgtcatccc taagttcaga cctggaccac 150  
ggtgtgtgtc ggttcaaggc caggtggatg aaaagacttt tottactat 200  
gactgtggca acaagacagt cacacctgtc agtccccctg ggaagaaact 250  
aaatgtcaca acggcctgga aagcacagaa ccagtagctg agagaggtgg 300  
tggacatact tacagagcaa ctgcgtgaca ttacgtctga gaattacaca 350  
cccaaggaaac ccctcacctc gcaggcaagg atgtcttgtg agcagaaagc 400  
tgaagagcac agcagtggtt cttggcagtt cagtttcgat gggcagatct 450  
tctctctctt tgactcagag aagagaatgt ggacaacggt tcactctgga 500  
gccagaaaga tgaagaaaaa gtggggagaat gacaagggtg tggccatgtc 550  
cttcattac ttctcaatgg gagactgtat aggatggctt gaggactttt 600  
tgatgggcat ggacagcacc ctggagccaa gtgcaggagc accactcgcc 650  
atgtcctcag gcacaaccca actcagggcc acagccacca cctcatctt 700  
ttgtgcctc ctcatctatc tccctgtctt catcctccct ggcattctga 750  
gagagtcctt tagagtgaac ggttaaagct gataccaaaa ggctcctgtg 800  
agcacggctc tgatcaaac ctgccttctg tctggccagc tgcccacgac 850  
ctacggtgta tgtccagtgg cctccagcag atcatgatga catcatggac 900  
ccaatagctc attcactgcc ttgattcctt ttgccaacaa ttttaccagc 950  
agttatacct aacatattat gcaattttct ctgtgtgcta cctgatggaa 1000  
ttctctgact taaagtctct gctgactaaa caagatatat cattttcttt 1050  
cttctctttt tgttttgaaa atcaagtact totttgaatg atgatctctt 1100  
tcttgcaaat gatattgtca gtaaaataat cagcttagac ttcagacctc 1150  
tggggattct ttccgtgtcc tgaagagaa tttttaaatt atttaataag 1200  
aaaaaaaa tattaatgat tgtttccttt agtaatttat tgttctgtac 1250  
tgatatttaa ataagagtt ctatttccca aaaaaaaaaa aaaaaa 1297

<210> 225  
<211> 246  
<212> PRT  
<213> Homo sapiens

<400> 225

Met Ala Ala Ala Ala Thr Lys Ile Leu Leu Cys Leu Pro Leu  
1 5 10 15  
Leu Leu Leu Leu Ser Gly Trp Ser Arg Ala Gly Arg Ala Asp Pro  
20 25 30  
His Ser Leu Cys Tyr Asp Ile Thr Val Ile Pro Lys Phe Arg Pro  
35 40 45  
Gly Pro Arg Trp Cys Ala Val Gln Gly Gln Val Asp Glu Lys Thr  
50 55 60  
Phe Leu His Tyr Asp Cys Gly Asn Lys Thr Val Thr Pro Val Ser  
65 70 75  
Pro Leu Gly Lys Lys Leu Asn Val Thr Thr Ala Trp Lys Ala Gln  
80 85 90  
Asn Pro Val Leu Arg Glu Val Val Asp Ile Leu Thr Glu Gln Leu  
95 100 105  
Arg Asp Ile Gln Leu Glu Asn Tyr Thr Pro Lys Glu Pro Leu Thr  
110 115 120  
Leu Gln Ala Arg Met Ser Cys Glu Gln Lys Ala Glu Gly His Ser  
125 130 135  
Ser Gly Ser Trp Gln Phe Ser Phe Asp Gly Gln Ile Phe Leu Leu  
140 145 150  
Phe Asp Ser Glu Lys Arg Met Trp Thr Thr Val His Pro Gly Ala  
155 160 165  
Arg Lys Met Lys Glu Lys Trp Glu Asn Asp Lys Val Val Ala Met  
170 175 180  
Ser Phe His Tyr Phe Ser Met Gly Asp Cys Ile Gly Trp Leu Glu  
185 190 195  
Asp Phe Leu Met Gly Met Asp Ser Thr Leu Glu Pro Ser Ala Gly  
200 205 210  
Ala Pro Leu Ala Met Ser Ser Gly Thr Thr Gln Leu Arg Ala Thr  
215 220 225  
Ala Thr Thr Leu Ile Leu Cys Cys Leu Leu Ile Ile Leu Pro Cys  
230 235 240  
Phe Ile Leu Pro Gly Ile  
245

<210> 226

<211> 735

<212> DNA

<213> Homo sapiens

<400> 226

gggaaagcca ttctgaaaac ccatctatata aaactatata ttttcatttc 50  
tgctgctagc tgccttgggc ctcacaattt tcattctgtt ttctgacttt 100  
caagttatat accgtggaat ggagttgata ccaaccataa catcgtggag 150

gggtttaatt ttggtggtag ccctcaccga attctggtgt ggctttcttt 200  
 gcagaggatt ccaccttcaa aatcatgaac tctggctgtt gatcaaaaga 250  
 gaatttggat tctactctaa aagtcaatat aggacttgcc aaaagaagct 300  
 agcagaagac tcaacctggc ctcccataaa caggacagat tattcaggtg 350  
 atggcaaaaa ttgattctac atcaacggag gctatgaaag ccatgaacag 400  
 attcaaaaaa gaaaactcaa attgggaggc caaccacag aacagcattt 450  
 ctgggccagg ctgtaatcag aattgtgtc gtacatgtc aacagcattg 500  
 ctttttccc caaaattaac acattgtgga gaagtgtatg tactctcccc 550  
 ttacctttcc tctctccatt caagcattca aagtatattt tcaatgaatt 600  
 aaaccttgca gcaagggacc ttagataggc ttattctgac tgtatgcttt 650  
 accaatgaga gaaaaaaatg catttctgt atcatccttt tcaataaact 700  
 gtattcattt tgaaaaaaaa aaaaaaaaaa aaaaa 735

<210> 227  
 <211> 115  
 <212> PRT  
 <213> Homo sapiens

<400> 227  
 Met Glu Leu Ile Pro Thr Ile Thr Ser Trp Arg Val Leu Ile Leu  
 1 5 10 15  
 Val Val Ala Leu Thr Gln Phe Trp Cys Gly Phe Leu Cys Arg Gly  
 20 25 30  
 Phe His Leu Gln Asn His Glu Leu Trp Leu Ile Lys Arg Glu  
 35 40 45  
 Phe Gly Phe Tyr Ser Lys Ser Gln Tyr Arg Thr Trp Gln Lys Lys  
 50 55 60  
 Leu Ala Glu Asp Ser Thr Trp Pro Pro Ile Asn Arg Thr Asp Tyr  
 65 70 75  
 Ser Gly Asp Gly Lys Asn Gly Phe Tyr Ile Asn Gly Gly Tyr Glu  
 80 85 90  
 Ser His Glu Gln Ile Pro Lys Arg Lys Leu Lys Leu Gly Gly Gln  
 95 100 105  
 Pro Thr Glu Gln His Phe Trp Ala Arg Leu  
 110 115

<210> 228  
 <211> 2185  
 <212> DNA  
 <213> Homo sapiens

<400> 228  
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 cacacatga agctcttgtg gcaggtaact gtgcaccacc acacctggaa 100

tgcacatcctg ctcccgttcg tctacctcac ggcgaaagtg tggattctgt 150  
 gtgcagccat cgctgctgcc gcctcagccg ggcgccagaa ctgcccctcc 200  
 gtttgctcgt gcagtaacca gttcagcaag gtggtgtgca cgcgccgggg 250  
 cctctccgag gtcccgcagg gtattccctc gaacaccccg tacctcaacc 300  
 tcatggagaa caacatccag atgatccagg ccgacacctt ccgccacctc 350  
 caccacctgg aggtcctgca gttgggcagg aactccatcc ggcagattga 400  
 ggtggggggc ttcaacggcc tggccagcct caacaccctg gagctgttcg 450  
 acaactggct gacagtcac cctagcgggg cctttgaata cctgtccaag 500  
 ctgcgggagc tctggcttcg caacaacccc atcgaaagca tcccctctta 550  
 cgccttcaac cgggtgccct cctcatgcg cctggacttg ggggagctca 600  
 agaagctgga gtatatctct gaggagctt ttgaggggct gttcaacctc 650  
 aagtatcga acttgggcat gtgcaacatt aaagacatgc ccaatctcac 700  
 ccccctgtg gggctggagg agctggagat gtcagggaac cacttccctc 750  
 agatcaggcc tggctccttc catggcctga gctccctcaa gaagctctgg 800  
 gtcatgaact cacaggtcag cctgattgag cggaatgctt ttgaaggctc 850  
 ggcttcactt gtggaactca acttgccca caataacctc tcttctttgc 900  
 cccatgacct ctttaccctg ctgaggtacc tgggtggagt gcactacac 950  
 cacaacctt ggaactgtga ttgtgacatt ctgtgctag cctggtggct 1000  
 tcgagagtat ataccacca attccacctg ctgtggccgc tgtcatgctc 1050  
 ccatgcacat gcgaggccgc tacctcgtgg aggtggacca ggcctccttc 1100  
 cagtgcctcg ccccttccat catggacgca cctcgagacc tcaacatttc 1150  
 tgagggtcgg atggcagaac ttaagtgtcg gactccccct atgtcctcgg 1200  
 tgaagtgtt gctgcccaat gggacagtcg tcagccacgc ctcccgcac 1250  
 ccaaggatct ctgtcctcaa cgacggcacc ttgaactttt cccacgtgct 1300  
 gctttcagac actggggtgt acacatgcat ggtgaccaat gttgcaggca 1350  
 actccaacgc ctggcctac ctcaatgtga gcacggctga gcttaacacc 1400  
 tccaactaca gttctctcac cacagtaaca gtggagacca cggagatctc 1450  
 gcctgaggac acaacgcgaa agtacaagcc tgttctctacc acgtccactg 1500  
 gttaccagcc ggcataatcc acctctacca cgggtgctcat tcagactacc 1550  
 cgtgtgccca agcaggtggc agtaccgcg acagacacca ctgacaagat 1600  
 gcagaccagc ctgatgaag toatgaagac caccaagatc atcattggct 1650  
 gctttgtggc agtgactctg ctgactgccg ccattgtgat tgtcttctat 1700

aaacttcgta agcggcacca gcagcggagt acagtcacag ccgcccggac 1750  
 tgttgagata atccaggtgg acgaagacat cccagcagca acatccgcag 1800  
 cagcaacacg agctccgtoc ggtgtatcag gtgagggggc agtagtgctg 1850  
 cccacaattc atgaccatat taactacaac acctacaac cagcacatgg 1900  
 ggcccactgg acagaaaaca gcctggggaa ctctctgcac cccacagtca 1950  
 ccactatctc tgaacottat ataattcaga cccatacaca ggacaaggta 2000  
 caggaaactc aaatatgact cccctcccc aaaaaactta taaaatgcaa 2050  
 tagaatgcac acaagacag caacttttgt acagagtggg gagagacttt 2100  
 ttctgtata tgcttatata ttaagtctat gggtcgttta aaaaaacag 2150  
 attatattaa aatttaaaga caaaaagtca aaaca 2185

<210> 229  
 <211> 653  
 <212> PRT  
 <213> Homo sapiens

<400> 229  
 Met Lys Leu Leu Trp Gln Val Thr Val His His His Thr Trp Asn  
 1 5 10 15  
 Ala Ile Leu Leu Pro Phe Val Tyr Leu Thr Ala Gln Val Trp Ile  
 20 25 30  
 Leu Cys Ala Ala Ile Ala Ala Ala Ala Ser Ala Gly Pro Gln Asn  
 35 40 45  
 Cys Pro Ser Val Cys Ser Cys Ser Asn Gln Phe Ser Lys Val Val  
 50 55 60  
 Cys Thr Arg Arg Gly Leu Ser Glu Val Pro Gln Gly Ile Pro Ser  
 65 70 75  
 Asn Thr Arg Tyr Leu Asn Leu Met Glu Asn Asn Ile Gln Met Ile  
 80 85 90  
 Gln Ala Asp Thr Phe Arg His Leu His His Leu Glu Val Leu Gln  
 95 100 105  
 Leu Gly Arg Asn Ser Ile Arg Gln Ile Glu Val Gly Ala Phe Asn  
 110 115 120  
 Gly Leu Ala Ser Leu Asn Thr Leu Glu Leu Phe Asp Asn Trp Leu  
 125 130 135  
 Thr Val Ile Pro Ser Gly Ala Phe Glu Tyr Leu Ser Lys Leu Arg  
 140 145 150  
 Glu Leu Trp Leu Arg Asn Asn Pro Ile Glu Ser Ile Pro Ser Tyr  
 155 160 165  
 Ala Phe Asn Arg Val Pro Ser Leu Met Arg Leu Asp Leu Gly Glu  
 170 175 180  
 Leu Lys Lys Leu Glu Tyr Ile Ser Glu Gly Ala Phe Glu Gly Leu



185					190					195				
Phe	Asn	Leu	Lys	Tyr	Leu	Asn	Leu	Gly	Met	Cys	Asn	Ile	Lys	Asp
				200					205					210
Met	Pro	Asn	Leu	Thr	Pro	Leu	Val	Gly	Leu	Glu	Glu	Leu	Glu	Met
				215					220					225
Ser	Gly	Asn	His	Phe	Pro	Glu	Ile	Arg	Pro	Gly	Ser	Phe	His	Gly
				230					235					240
Leu	Ser	Ser	Leu	Lys	Lys	Leu	Trp	Val	Met	Asn	Ser	Gln	Val	Ser
				245					250					255
Leu	Ile	Glu	Arg	Asn	Ala	Phe	Asp	Gly	Leu	Ala	Ser	Leu	Val	Glu
				260					265					270
Leu	Asn	Leu	Ala	His	Asn	Asn	Leu	Ser	Ser	Leu	Pro	His	Asp	Leu
				275					280					285
Phe	Thr	Pro	Leu	Arg	Tyr	Leu	Val	Glu	Leu	His	Leu	His	His	Asn
				290					295					300
Pro	Trp	Asn	Cys	Asp	Cys	Asp	Ile	Leu	Trp	Leu	Ala	Trp	Trp	Leu
				305					310					315
Arg	Glu	Tyr	Ile	Pro	Thr	Asn	Ser	Thr	Cys	Cys	Gly	Arg	Cys	His
				320					325					330
Ala	Pro	Met	His	Met	Arg	Gly	Arg	Tyr	Leu	Val	Glu	Val	Asp	Gln
				335					340					345
Ala	Ser	Phe	Gln	Cys	Ser	Ala	Pro	Phe	Ile	Met	Asp	Ala	Pro	Arg
				350					355					360
Asp	Leu	Asn	Ile	Ser	Glu	Gly	Arg	Met	Ala	Glu	Leu	Lys	Cys	Arg
				365					370					375
Thr	Pro	Pro	Met	Ser	Ser	Val	Lys	Trp	Leu	Leu	Pro	Asn	Gly	Thr
				380					385					390
Val	Leu	Ser	His	Ala	Ser	Arg	His	Pro	Arg	Ile	Ser	Val	Leu	Asn
				395					400					405
Asp	Gly	Thr	Leu	Asn	Phe	Ser	His	Val	Leu	Leu	Ser	Asp	Thr	Gly
				410					415					420
Val	Tyr	Thr	Cys	Met	Val	Thr	Asn	Val	Ala	Gly	Asn	Ser	Asn	Ala
				425					430					435
Ser	Ala	Tyr	Leu	Asn	Val	Ser	Thr	Ala	Glu	Leu	Asn	Thr	Ser	Asn
				440					445					450
Tyr	Ser	Phe	Phe	Thr	Thr	Val	Thr	Val	Glu	Thr	Thr	Glu	Ile	Ser
				455					460					465
Pro	Glu	Asp	Thr	Thr	Arg	Lys	Tyr	Lys	Pro	Val	Pro	Thr	Thr	Ser
				470					475					480
Thr	Gly	Tyr	Gln	Pro	Ala	Tyr	Thr	Thr	Ser	Thr	Thr	Val	Leu	Ile
				485					490					495
Gln	Thr	Thr	Arg	Val	Pro	Lys	Gln	Val	Ala	Val	Pro	Ala	Thr	Asp

500	505	510
Thr Thr Asp Lys Met Gln Thr Ser Leu Asp Glu Val Met Lys Thr		
515	520	525
Thr Lys Ile Ile Ile Gly Cys Phe Val Ala Val Thr Leu Leu Ala		
530	535	540
Ala Ala Met Leu Ile Val Phe Tyr Lys Leu Arg Lys Arg His Gln		
545	550	555
Gln Arg Ser Thr Val Thr Ala Ala Arg Thr Val Glu Ile Ile Gln		
560	565	570
Val Asp Glu Asp Ile Pro Ala Ala Thr Ser Ala Ala Ala Thr Ala		
575	580	585
Ala Pro Ser Gly Val Ser Gly Glu Gly Ala Val Val Leu Pro Thr		
590	595	600
Ile His Asp His Ile Asn Tyr Asn Thr Tyr Lys Pro Ala His Gly		
605	610	615
Ala His Trp Thr Glu Asn Ser Leu Gly Asn Ser Leu His Pro Thr		
620	625	630
Val Thr Thr Ile Ser Glu Pro Tyr Ile Ile Gln Thr His Thr Lys		
635	640	645
Asp Lys Val Gln Glu Thr Gln Ile		
650		

<210> 230  
 <211> 2846  
 <212> DNA  
 <213> Homo sapiens

<400> 230  
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 tacacagtc ttaatgaagc ctgccctgga gcagagtgga atatcatgtg 150  
 tcgggagtg tgtgaatatg atcagattga gtgcgtctgc ccggaaaaga 200  
 gggaagtct ggggtatacc atcccttgct gcaggaatga ggagaatgag 250  
 tgtgaactct gctgatcca ccaggttgt accatctttg aaaactgcaa 300  
 gagctgccga aatggctcat gggggggtac cttggatgac ttctatgtga 350  
 aggggttcta ctgtgcagag tgccgagcag gctggtacgg aggagactgc 400  
 atgcgatgtg gccaggttct gcgagcccca aagggtcaga ttttgttgga 450  
 aagctatccc ctaaatgctc actgtgaatg gaccattcat gctaaacctg 500  
 ggtttgtcat ccaactaaga tttgtcatgt tgagtctgga gtttgactac 550  
 atgtgccagt atgactatgt tgaggttctg gatggagaca accgcgatgg 600  
 ccagatcatc aagcgtgtct gtggcaacga gcggccagct cctatccaga 650

gcataggatc ctactccac gtctcttcc actccgatgg ctccaagaat 700  
 tttagcggtt tccatgccat ttatgaggag atcacagcat gctcctcatc 750  
 ccctgttttc catgacggca cgtgcgtcct tgacaaggct ggatcttaca 800  
 agtgtgcctg cttggcaggc tatactgggc agcgctgtga aaatctcctt 850  
 gaagaaagaa actgctcaga cctggggggc ccagtcaatg ggtaccagaa 900  
 aataacaggg gccctggggc ttatcaacgg acgccatgct aaaattggca 950  
 ccgtgggtgc tttctttgtt aacaactcct atgttcttag tggcaatgag 1000  
 aaaagaactt gccagcagaa tggagagtgg tcagggaagc agcccatctg 1050  
 cataaaagcc tgcgagaaac caaagatttc agacctggtg agaaggagag 1100  
 ttcttccgat gcaggttcag tcaagggaga caccattaca ccagctatac 1150  
 tcagcgccct tcagcaagca gaaactgcag agtgccctca ccaagaagcc 1200  
 agcccttccc ttgggagatc tgcccatggg ataccaacat ctgcataccc 1250  
 agctccagta tgagtgcac tcaccttctt accgccgctt gggcagcagc 1300  
 aggaggacat gtctgaggac tgggaagtgg agtggggcgg caccatcctg 1350  
 catccctatc tgcgggaaaa ttgagaacat cactgctcca aagaccaag 1400  
 ggttgcgctg gccgtggcag gcagccatct acaggaggac cagcgggggtg 1450  
 catgacggca gccacacaa gggagcgtgg ttctagtct gcagcgggtg 1500  
 cctgggtaat gagcgactg tgggtggggc tgcccactgt gttactgacc 1550  
 tggggaaggc caccatgac aagacagcag aactgaaagt tgttttggg 1600  
 aaattctacc gggatgatga ccgggatgag aagaccatcc agagcctaca 1650  
 gatttctgct atcattctgc atcccaacta tgaccccatc ctgcttgatg 1700  
 ctgacatgc catctgaag ctctagaca aggcccgat cagcacccga 1750  
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 ggagtcacac atcactgtgg ctggctggaa tgtcttgga cagctgagga 1850  
 gccctggctt caagaacgac aactgctgct ctgggggtgt cagtgtggtg 1900  
 gactcgctgc tgtgtgagga gcagcatgag gacctggga tccagtgag 1950  
 tgtcactgat aacatgttct gtgccagctg ggaaccact gcccttctg 2000  
 atatctgcac tgcagagaca ggagcatcg cggctgtgtc ctcccgga 2050  
 cgagcatctc ctgagccacg ctggcatctg atgggactgg tcagctggag 2100  
 ctatgataaa acatgcagcc acaggctctc cactgccttc accaagggtc 2150  
 tgcttttaa agactggatt gaaagaata tgaaatgaac catgctcatg 2200  
 cactccttga gaagtgttc tgtatatccg tctgtacgtg tgcattgag 2250

tgaagcagtg tgggcctgaa gtgtgatttg gccctgtgaac ttggctgtgc 2300  
cagggtcttct gacttcaggg acaaaactca gtgaagggtg agtagacctc 2350  
cattgtctggt aggcgtgatgc cgcgtccact actaggacag ccaattggaa 2400  
gatgccaggg cttgcaagaa gtaagtttct tcaagaaga ccatatacaa 2450  
aacctctcca ctccactgac ctgggtgtct tcccactt tcagttatac 2500  
gaatgccatc agcttgacca gggaagatct gggcttcacg aggccctttt 2550  
tgaggctctc aagttctaga gagctgcctg tgggacagcc cagggcagca 2600  
gagctgggat gtggtgcatg cctttgtgta catggccaca gtacagtctg 2650  
gtccttttcc ttcccctatc cttgtacaca ttttaataaa ataagggttg 2700  
gcttctgaac taaaaaaaa aaaaaaaaa aaaaaaaaa aaaaaaaaa 2750  
aaaaaaaaa aaaaaaaaa aaaaaaaaa aaaaaaaaa aaaaaaaaa 2800  
aaaaaaaaa aaaaaaaaa aaaaaaaaa aaaaaaaaa aaaaaa 2846

<210> 231  
<211> 720  
<212> PRT  
<213> Homo sapiens

<400> 231  
Met Glu Leu Gly Cys Trp Thr Gln Leu Gly Leu Thr Phe Leu Gln  
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Leu Leu Leu Ile Ser Ser Leu Pro Arg Glu Tyr Thr Val Ile Asn  
20 25 30  
Glu Ala Cys Pro Gly Ala Glu Trp Asn Ile Met Cys Arg Glu Cys  
35 40 45  
Cys Glu Tyr Asp Gln Ile Glu Cys Val Cys Pro Gly Lys Arg Glu  
50 55 60  
Val Val Gly Tyr Thr Ile Pro Cys Cys Asn Glu Glu Asn Glu  
65 70 75  
Cys Asp Ser Cys Leu Ile His Pro Gly Cys Thr Ile Phe Glu Asn  
80 85 90  
Cys Lys Ser Cys Arg Asn Gly Ser Trp Gly Gly Thr Leu Asp Asp  
95 100 105  
Phe Tyr Val Lys Gly Phe Tyr Cys Ala Glu Cys Arg Ala Gly Trp  
110 115 120  
Tyr Gly Gly Asp Cys Met Arg Cys Gly Gln Val Leu Arg Ala Pro  
125 130 135  
Lys Gly Gln Ile Leu Leu Glu Ser Tyr Pro Leu Asn Ala His Cys  
140 145 150  
Glu Trp Thr Ile His Ala Lys Pro Gly Phe Val Ile Gln Leu Arg  
155 160 165

Phe Val Met Leu	Ser Leu Glu Phe Asp Tyr Met Cys Gln Tyr Asp	170	175	180
Tyr Val Glu Val	Arg Asp Gly Asp Asn Arg Asp Gly Gln Ile Ile	185	190	195
Lys Arg Val Cys	Gly Asn Glu Arg Pro Ala Pro Ile Gln Ser Ile	200	205	210
Gly Ser Ser Leu	His Val Leu Phe His Ser Asp Gly Ser Lys Asn	215	220	225
Phe Asp Gly Phe	His Ala Ile Tyr Glu Glu Ile Thr Ala Cys Ser	230	235	240
Ser Ser Pro Cys	Phe His Asp Gly Thr Cys Val Leu Asp Lys Ala	245	250	255
Gly Ser Tyr Lys	Cys Ala Cys Leu Ala Gly Tyr Thr Gly Gln Arg	260	265	270
Cys Glu Asn Leu	Leu Glu Glu Arg Asn Cys Ser Asp Pro Gly Gly	275	280	285
Pro Val Asn Gly	Tyr Gln Lys Ile Thr Gly Gly Pro Gly Leu Ile	290	295	300
Asn Gly Arg His	Ala Lys Ile Gly Thr Val Val Ser Phe Phe Cys	305	310	315
Asn Asn Ser Tyr	Val Leu Ser Gly Asn Glu Lys Arg Thr Cys Gln	320	325	330
Gln Asn Gly Glu	Trp Ser Gly Lys Gln Pro Ile Cys Ile Lys Ala	335	340	345
Cys Arg Glu Pro	Lys Ile Ser Asp Leu Val Arg Arg Arg Val Leu	350	355	360
Pro Met Gln Val	Gln Ser Arg Glu Thr Pro Leu His Gln Leu Tyr	365	370	375
Ser Ala Ala Phe	Ser Lys Gln Lys Leu Gln Ser Ala Pro Thr Lys	380	385	390
Lys Pro Ala Leu	Pro Phe Gly Asp Leu Pro Met Gly Tyr Gln His	395	400	405
Leu His Thr Gln	Leu Gln Tyr Glu Cys Ile Ser Pro Phe Tyr Arg	410	415	420
Arg Leu Gly Ser	Ser Arg Arg Thr Cys Leu Arg Thr Gly Lys Trp	425	430	435
Ser Gly Arg Ala	Pro Ser Cys Ile Pro Ile Cys Gly Lys Ile Glu	440	445	450
Asn Ile Thr Ala	Pro Lys Thr Gln Gly Leu Arg Trp Pro Trp Gln	455	460	465
Ala Ala Ile Tyr	Arg Arg Thr Ser Gly Val His Asp Gly Ser Leu	470	475	480

His	Lys	Gly	Ala	Trp	Phe	Leu	Val	Cys	Ser	Gly	Ala	Leu	Val	Asn
				485					490					495
Glu	Arg	Thr	Val	Val	Val	Ala	Ala	His	Cys	Val	Thr	Asp	Leu	Gly
				500					505					510
Lys	Val	Thr	Met	Ile	Lys	Thr	Ala	Asp	Leu	Lys	Val	Val	Leu	Gly
				515					520					525
Lys	Phe	Tyr	Arg	Asp	Asp	Asp	Arg	Asp	Glu	Lys	Thr	Ile	Gln	Ser
				530					535					540
Leu	Gln	Ile	Ser	Ala	Ile	Ile	Leu	His	Pro	Asn	Tyr	Asp	Pro	Ile
				545					550					555
Leu	Leu	Asp	Ala	Asp	Ile	Ala	Ile	Leu	Lys	Leu	Leu	Asp	Lys	Ala
				560					565					570
Arg	Ile	Ser	Thr	Arg	Val	Gln	Pro	Ile	Cys	Leu	Ala	Ala	Ser	Arg
				575					580					585
Asp	Leu	Ser	Thr	Ser	Phe	Gln	Glu	Ser	His	Ile	Thr	Val	Ala	Gly
				590					595					600
Trp	Asn	Val	Leu	Ala	Asp	Val	Arg	Ser	Pro	Gly	Phe	Lys	Asn	Asp
				605					610					615
Thr	Leu	Arg	Ser	Gly	Val	Val	Ser	Val	Val	Asp	Ser	Leu	Leu	Cys
				620					625					630
Glu	Glu	Gln	His	Glu	Asp	His	Gly	Ile	Pro	Val	Ser	Val	Thr	Asp
				635					640					645
Asn	Met	Phe	Cys	Ala	Ser	Trp	Glu	Pro	Thr	Ala	Pro	Ser	Asp	Ile
				650					655					660
Cys	Thr	Ala	Glu	Thr	Gly	Gly	Ile	Ala	Ala	Val	Ser	Phe	Pro	Gly
				665					670					675
Arg	Ala	Ser	Pro	Glu	Pro	Arg	Trp	His	Leu	Met	Gly	Leu	Val	Ser
				680					685					690
Trp	Ser	Tyr	Asp	Lys	Thr	Cys	Ser	His	Arg	Leu	Ser	Thr	Ala	Phe
				695					700					705
Thr	Lys	Val	Leu	Pro	Phe	Lys	Asp	Trp	Ile	Glu	Arg	Asn	Met	Lys
				710					715					720

<210> 232

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 232

aggttcgtga tggagacaac cgcg 24

<210> 233

<211> 24

<212> DNA

<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 233  
tgccaaggac gcactgccgt catg 24

<210> 234  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 234  
tggccagatc atcaagcgtg tctgtggcaa cgagcggcca gtcctatcc 50

<210> 235  
<211> 1964  
<212> DNA  
<213> Homo sapiens

<400> 235  
accaggcatt gtatcttcag ttgtcatcaa gtcgcaatc agattggaaa 50  
agctcaactt gaagctttct tgcctgcagt gaagcagaga gatagatatt 100  
attcacgtaa taaaaaacat gggettcaac ctgactttcc accttcccta 150  
caaatccga ttactgttgc tgttgacttt gtgctgaca gtgggtgggt 200  
gggccaccag taactaattc gtgggtgcca ttcaagagat tcctaaagca 250  
aaggagtcca tggctaattt ccataagacc ctcatcttgg ggaaggaaaa 300  
aactctgact aatgaagcat ccacgaagaa ggtagaactt gacaactgtc 350  
cttctgtgtc tccttacctc agaggccaga gcaagctcat ttccaacca 400  
gatctcactt tggaagaggt acaggcagaa aatcccaag tgtccagagg 450  
ccggtatcgc cctcaggaat gtaaagcttt acagagggtc gccatcctcg 500  
ttccccaccg gaacagagag aaacacctga tgtacctgtc ggaacatctg 550  
catcccttcc tgcagaggca gcagctggat tatggcatct acgtcatcca 600  
ccaggctgaa ggtaaaaagt ttaatcgagc caaactcttg aatgtgggct 650  
atctagaagc cctcaaggaa gaaaattggg actgctttat attccacgat 700  
gtggacctgg taccogagaa tgactttaac ctttacaagt gtgaggagca 750  
tcccaagcat ctggtggttg gcaggaacag cactgggtac aggttacgtt 800  
acagtggata ttttgggggt gttactgccc taagcagaga gcagtttttc 850  
aagggtgaat gattctctaa caactactgg ggtatggggag gcgaagacga 900  
tgacctcaga ctcagggttg agctccaaag aatgaaaatt tcccgccccc 950  
tgccctgaagt gggtaaatat acaatggtct tccacactag agacaaaaggc 1000

aatgaggtga acgcagaacg gatgaagctc ttacaccaag tgtcacgagt 1050  
ctggagaaca gatgggttga gtagttgttc ttataaatta gtatctgtgg 1100  
aacacaatcc tttatatatc aacatcacag tggatttctg gtttgggtgca 1150  
tgaccttgga tcttttggtg atgtttggaa gaactgattc tttgtttgca 1200  
ataattttgg cctagagact tcaaatagta gcacacatta agaacctgtt 1250  
acagctcatt gttgagctga atttttcctt tttgtatttt cttagcagag 1300  
ctcctgggtga tgtagagtat aaaacagttg taacaagaca gctttcttag 1350  
tcattttgat catgaggggtt aaatattgta atatggatac ttgaaggact 1400  
ttatataaaa ggatgactca aaggataaaa tgaacgctat ttgaggactc 1450  
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cagtgatgcc caccagagaa tacattctct attagttttt aaagagtttt 1850  
tgtaaaaatg ttttgtacaa gtaggatatg aattagcagt ttacaagttt 1900  
acatatatac taataataaa tatgtctatc aaatacctct gtagtaaaat 1950  
gtgaaaaagc aaaa 1964

<210> 236  
<211> 344  
<212> PRT  
<213> Homo sapiens

<220>  
<221> Signal peptide  
<222> 1-27  
<223> Signal peptide

<220>  
<221> N-glycosylation sites  
<222> 4-7, 220-223, 335-338  
<223> N-glycosylation sites

<220>  
<221> Xylose isomerase proteins  
<222> 191-201  
<223> Xylose isomerase proteins

<400> 236  
Met Gly Phe Asn Leu Thr Phe His Leu Ser Tyr Lys Phe Arg Leu  
1 5 10 15



Leu	Leu	Leu	Leu	Thr	Leu	Cys	Leu	Thr	Val	Val	Gly	Trp	Ala	Thr	
				20					25					30	
Ser	Asn	Tyr	Phe	Val	Gly	Ala	Ile	Gln	Glu	Ile	Pro	Lys	Ala	Lys	
				35					40					45	
Glu	Phe	Met	Ala	Asn	Phe	His	Lys	Thr	Leu	Ile	Leu	Gly	Lys	Gly	
				50					55					60	
Lys	Thr	Leu	Thr	Asn	Glu	Ala	Ser	Thr	Lys	Lys	Val	Glu	Leu	Asp	
				65					70					75	
Asn	Cys	Pro	Ser	Val	Ser	Pro	Tyr	Leu	Arg	Gly	Gln	Ser	Lys	Leu	
				80					85					90	
Ile	Phe	Lys	Pro	Asp	Leu	Thr	Leu	Glu	Glu	Val	Gln	Ala	Glu	Asn	
				95					100					105	
Pro	Lys	Val	Ser	Arg	Gly	Arg	Tyr	Arg	Pro	Gln	Glu	Cys	Lys	Ala	
				110					115					120	
Leu	Gln	Arg	Val	Ala	Ile	Leu	Val	Pro	His	Arg	Asn	Arg	Glu	Lys	
				125					130					135	
His	Leu	Met	Tyr	Leu	Leu	Glu	His	Leu	His	Pro	Phe	Leu	Gln	Arg	
				140					145					150	
Gln	Gln	Leu	Asp	Tyr	Gly	Ile	Tyr	Val	Ile	His	Gln	Ala	Glu	Gly	
				155					160					165	
Lys	Lys	Phe	Asn	Arg	Ala	Lys	Leu	Leu	Asn	Val	Gly	Tyr	Leu	Glu	
				170					175					180	
Ala	Leu	Lys	Glu	Glu	Asn	Trp	Asp	Cys	Phe	Ile	Phe	His	Asp	Val	
				185					190					195	
Asp	Leu	Val	Pro	Glu	Asn	Asp	Phe	Asn	Leu	Tyr	Lys	Cys	Glu	Glu	
				200					205					210	
His	Pro	Lys	His	Leu	Val	Val	Gly	Arg	Asn	Ser	Thr	Gly	Tyr	Arg	
				215					220					225	
Leu	Arg	Tyr	Ser	Gly	Tyr	Phe	Gly	Gly	Val	Thr	Ala	Leu	Ser	Arg	
				230					235					240	
Glu	Gln	Phe	Phe	Lys	Val	Asn	Gly	Phe	Ser	Asn	Asn	Tyr	Trp	Gly	
				245					250					255	
Trp	Gly	Gly	Glu	Asp	Asp	Leu	Arg	Leu	Arg	Val	Glu	Leu	Gln		
				260					265					270	
Arg	Met	Lys	Ile	Ser	Arg	Pro	Leu	Pro	Glu	Val	Gly	Lys	Tyr	Thr	
				275					280					285	
Met	Val	Phe	His	Thr	Arg	Asp	Lys	Gly	Asn	Glu	Val	Asn	Ala	Glu	
				290					295					300	
Arg	Met	Lys	Leu	Leu	His	Gln	Val	Ser	Arg	Val	Trp	Arg	Thr	Asp	
				305					310					315	
Gly	Leu	Ser	Ser	Cys	Ser	Tyr	Lys	Leu	Val	Ser	Val	Glu	His	Asn	
				320					325					330	

Pro Leu Tyr Ile Asn Ile Thr Val Asp Phe Trp Phe Gly Ala  
335 340

<210> 237  
<211> 25  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 237  
ccttacctca gaggccagag caagc 25

<210> 238  
<211> 25  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 238  
gagcttcac cgttctgcgt tcacc 25

<210> 239  
<211> 46  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 239  
caggaatgta aagctttaca gagggtegcc atcctcgttc cccacc 46

<210> 240  
<211> 2567  
<212> DNA  
<213> Homo sapiens

<400> 240  
cgtgggcccgg ggtcgcgcag cgggctgtgg gcgcgcccg aggagcgacc 50  
gccgcagttc tcgagctcca gctgcattcc ctccgcgtcc gccccacgct 100  
tctcccgctc cgggcccgc aatggcccag gcagtgtggt cgcgcctcgg 150  
ccgcacatctc tggettgcct gcctcctgcc ctgggcccgc gcaggggtgg 200  
ccgcaggcct gtatgaactc aatctcacca ccgatagccc tgcaccacag 250  
ggagcgggtg tgaccatctc ggccagcctg gtggccaagg acaacggcag 300  
cctggccctg ccgcgtgacg cccacctcta ccgcttcacc tggatccaca 350  
ccccgctggt gcttactggc aagatggaga aggttctcag ctccaccatc 400  
cgtgtggtcg gccacgtgcc cggggaattc ccggtctctg tctgggtcac 450  
tgccgctgac tgctggatgt gccagcctgt ggccaggggc tttgtgtgcc 500  
tccccatcac agagtctctc gtgggggacc ttgttgtcac ccagaacact 550

tccctaccct ggcccagctc ctatctcact aagaccgtcc tgaaagtctc 600  
 ctctctctc cagcaccga gcaacttctc caagaccgcc ttgtttctct 650  
 acagctggga ctctggggac gggaccaga tggtgactga agactccgtg 700  
 gtctattata actattccat catcgggacc ttcaccgtga agctcaaatg 750  
 ggtggcggag tgggaagagg tggagccgga tgccacgagg gctgtgaagc 800  
 agaagaccgg gaacttctcc gcctcgctga agctgcagga aacctttcga 850  
 ggcatccaag tgttggggcc caccctaatt cagaccttcc aaaagatgac 900  
 cgtgaacctg aacttctcgg ggagccctcc tctgactgtg tgcctggctg 950  
 tcaagcctga gtgcctcccg ctggaggaag gggagtgcga cctgtgtcc 1000  
 gtggccagca cagcgtacaa cctgaccac accttcaggg acctggggga 1050  
 ctactgttc agcatccggg ccgagaatat catcagcaag acacatcagt 1100  
 accacaagat ccaggtgtgg cctccagaa tccagccgcc tgtctttgct 1150  
 tccccatgtg ctacacttat cactgtgatg ttggccttca tcatgtacat 1200  
 gaccctcgcg aatgccactc agcaaaagga catgggtggag aacccggagc 1250  
 caccctctgg ggctcaggtc tgcctgccaga tgtgctgtgg gcctttcttg 1300  
 ctggagactc catctgagta cctggaaatt gttcgtgaga accacgggct 1350  
 gctcccgccc ctctataagt ctgtcaaaac ttacacogtg tgagcactcc 1400  
 cctcccccac ccatctcag tgtaactga ctgctgaact ggagtttcca 1450  
 gcagggtggt gtgcaccact gaccaggagg gggtcatctg cgtggggctg 1500  
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 tctgtgtcc attgggggtt ctgagttcc tccccagac agccctacct 1800  
 gtgccagaga gctagaaaga aggtcataaa gggtaaaaa tccataacta 1850  
 aaggtgttac acatagatgg gcacactcac agagagaagt gtgcatgtac 1900  
 acacaccaca cacacacaca cacacacaca cacagaaata taacacatg 1950  
 cgtcacatgg gcatttcaga tgatcagctc tgtatctggt taagtctggt 2000  
 gctgggatgc accctgcact agagctgaaa ggaaatttga cctccaagca 2050  
 gccttgacag gttctgggcc cgggccctcc ctttgtgctt tgtctctgca 2100  
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cctggatggg ggcaggact aatactgagt gattgcagag tgctttataa 2200  
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 aaaaaaatac aaaaagttag cggggcgtgg tgggtgggtg cgttagtccc 2450  
 agctactcgg gaggtcagag caggagaatg gtgcgaacco gggaggcgga 2500  
 gcttgcaagt agcccagatg gcgccactgc actccagcct gactgacaga 2550  
 gcgagactct gtctcca 2567

<210> 241  
 <211> 423  
 <212> PRT  
 <213> Homo sapiens

<400> 241  
 Met Ala Gln Ala Val Trp Ser Arg Leu Gly Arg Ile Leu Trp Leu  
 1 5 10 15  
 Ala Cys Leu Leu Pro Trp Ala Pro Ala Gly Val Ala Ala Gly Leu  
 20 25 30  
 Tyr Glu Leu Asn Leu Thr Thr Asp Ser Pro Ala Thr Thr Gly Ala  
 35 40 45  
 Val Val Thr Ile Ser Ala Ser Leu Val Ala Lys Asp Asn Gly Ser  
 50 55 60  
 Leu Ala Leu Pro Ala Asp Ala His Leu Tyr Arg Phe His Trp Ile  
 65 70 75  
 His Thr Pro Leu Val Leu Thr Gly Lys Met Glu Lys Gly Leu Ser  
 80 85 90  
 Ser Thr Ile Arg Val Val Gly His Val Pro Gly Glu Phe Pro Val  
 95 100 105  
 Ser Val Trp Val Thr Ala Ala Asp Cys Trp Met Cys Gln Pro Val  
 110 115 120  
 Ala Arg Gly Phe Val Val Leu Pro Ile Thr Glu Phe Leu Val Gly  
 125 130 135  
 Asp Leu Val Val Thr Gln Asn Thr Ser Leu Pro Trp Pro Ser Ser  
 140 145 150  
 Tyr Leu Thr Lys Thr Val Leu Lys Val Ser Phe Leu Leu His Asp  
 155 160 165  
 Pro Ser Asn Phe Leu Lys Thr Ala Leu Phe Leu Tyr Ser Trp Asp  
 170 175 180  
 Phe Gly Asp Gly Thr Gln Met Val Thr Glu Asp Ser Val Val Tyr  
 185 190 195

Tyr Asn Tyr Ser Ile Ile Gly Thr Phe Thr Val Lys Leu Lys Val  
 200 205  
 Val Ala Glu Trp Glu Glu Val Glu Pro Asp Ala Thr Arg Ala Val  
 215 220 225  
 Lys Gln Lys Thr Gly Asp Phe Ser Ala Ser Leu Lys Leu Gln Glu  
 230 235 240  
 Thr Leu Arg Gly Ile Gln Val Leu Gly Pro Thr Leu Ile Gln Thr  
 245 250 255  
 Phe Gln Lys Met Thr Val Thr Leu Asn Phe Leu Gly Ser Pro Pro  
 260 265 270  
 Leu Thr Val Cys Trp Arg Leu Lys Pro Glu Cys Leu Pro Leu Glu  
 275 280 285  
 Glu Gly Glu Cys His Pro Val Ser Val Ala Ser Thr Ala Tyr Asn  
 290 295 300  
 Leu Thr His Thr Phe Arg Asp Pro Gly Asp Tyr Cys Phe Ser Ile  
 305 310 315  
 Arg Ala Glu Asn Ile Ile Ser Lys Thr His Gln Tyr His Lys Ile  
 320 325 330  
 Gln Val Trp Pro Ser Arg Ile Gln Pro Ala Val Phe Ala Phe Pro  
 335 340 345  
 Cys Ala Thr Leu Ile Thr Val Met Leu Ala Phe Ile Met Tyr Met  
 350 355 360  
 Thr Leu Arg Asn Ala Thr Gln Gln Lys Asp Met Val Glu Asn Pro  
 365 370 375  
 Glu Pro Pro Ser Gly Val Arg Cys Cys Cys Gln Met Cys Cys Gly  
 380 385 390  
 Pro Phe Leu Leu Glu Thr Pro Ser Glu Tyr Leu Glu Ile Val Arg  
 395 400 405  
 Glu Asn His Gly Leu Leu Pro Pro Leu Tyr Lys Ser Val Lys Thr  
 410 415 420

Tyr Thr Val

<210> 242

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 242

catttcctta ccttggaacc agctcc 26

<210> 243

<211> 25

<212> DNA

<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 243  
gaaaggccca cagcacatct ggcag 25

<210> 244  
<211> 46  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 244  
ccacgaccgc agcaacttcc tcaagaccga cttgtttctc tacagc 46

<210> 245  
<211> 485  
<212> DNA  
<213> Homo sapiens

<400> 245  
gtcgaagacc cagcagtggt acagccagac agacggcagc atggcactga 50  
gtccccagat ctggggcgct tgcctcctgc tctcctcctc cctgcgccag 100  
ctgaccagtg gctctgtttt cccacaacag acgggacaac ttgcagagct 150  
gcaaccccag gacagagctg gagccagggc cagctggatg cccatgttcc 200  
agaggcgaag gaggcgagac acccacttcc ccatctgcat tttctgctgc 250  
ggctgtgtgc atcgatcaaa gtgtgggatg tgctgcaaga cgtagaacct 300  
acctgccttg ccccgctccc ctcccttctc tatttattcc tgctgcccc 350  
gaacataggt cttggaataa aatggctggt tcttttgttt tccaaaaaaa 400  
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 450  
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaa 485

<210> 246  
<211> 84  
<212> PRT  
<213> Homo sapiens

<400> 246  
Met Ala Leu Ser Ser Gln Ile Trp Ala Ala Cys Leu Leu Leu Leu  
1 5 10 15  
Leu Leu Leu Ala Ser Leu Thr Ser Gly Ser Val Phe Pro Gln Gln  
20 25 30  
Thr Gly Gln Leu Ala Glu Leu Gln Pro Gln Asp Arg Ala Gly Ala  
35 40 45  
Arg Ala Ser Trp Met Pro Met Phe Gln Arg Arg Arg Arg Arg  
50 55 60  
Thr His Phe Pro Ile Cys Ile Phe Cys Cys Gly Cys Cys His Arg  
65 70 75

Ser Lys Cys Gly Met Cys Cys Lys Thr

80

<210> 247  
<211> 2359  
<212> DNA  
<213> Homo sapiens

<400> 247  
ctgtcaggaa ggaccatctg aaggctgcaa tttgtttcta gggaggcagg 50  
tgcctggcctg gcctggatct tccaccatgt tctgttgct gccttttgat 100  
agcctgattg tcaacctctt gggcatctcc ctgactgtcc tcttcacct 150  
ccttctcgtt ttcacatag tgccagccat ttttgagtc tcctttggta 200  
tcgcgaaact ctacatgaaa agtctgttaa aaatctttgc gtgggctacc 250  
ttgagaatgg agcgaggagc caaggagaag aaccaccago ttacaaagcc 300  
ctacaccaac ggaatcattg caaaggatcc cacttcacta gaagaagaga 350  
tcaaagagat tcgtcgaagt ggtagtagta aggctctgga caacactcca 400  
gagttcgagc tctctgacat tttctacttt tgccggaaaag gaatggagac 450  
cattatggat gatgagggtg caaagagatt ctacagagaa gaactggagt 500  
cctggaaact gctgagcaga accaattata acttcacgta catcagcctt 550  
cggctcacgg tcctgtgggg gttaggagtg ctgattcggt actgctttct 600  
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tgggcacaac tgtggtggga tacttgcaa atgggaggtt taaggaaatc 700  
atgagtaaac atgttcactt aatgtgttac cggatctgcg tgcgagcgct 750  
gacagccatc atcacctacc atgacaggga aaacagacca agaaatggtg 800  
gcactctgtg ggccaatcat acctcacga tcgatgtgat catcttgcc 850  
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catcaataat acatcggtga tgatgttcaa aaaggaagt tttgaaattg 1100  
gagccacagt ttaacctgtt gctatcaagt atgacctca atttgcgat 1150  
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gaagagggag aaggtgaagg acacgttcaa ggaggagcag cagaagctgt 1400  
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 cgggatccct gtgcaaccgg cgcagcctac ccttggtggt ctaaacggat 1650  
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 cggccaccgg ctctccagga aaggcacagc tgaggcactg tggctgggct 1900  
 cggcctcaac atcgccccc gccttgagc tctgcagaca tgataggaag 1950  
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 tgctgtgtgt gatgggggta ctaaaggag gggaagaggc cagggtgggccc 2050  
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 aactcccat gtgatgcgcg ctttgttgaa tgtgtgtctc ggtttcccca 2150  
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 gttgtgggga ttaaagtgtc gcgggtgagt gaaggacaca tcacgttcag 2250  
 tgtttcaagt acaggccac aaaacggggc acggcaggcc tgagctcaga 2300  
 gctgctgcac tgggctttgt atttggtctt gtgagtaaat aaactggct 2350  
 ggtgaatga 2359

<210> 248  
 <211> 456  
 <212> PRT  
 <213> Homo sapiens

<400> 248  
 Met Phe Leu Leu Pro Phe Asp Ser Leu Ile Val Asn Leu Leu  
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 Gly Ile Ser Leu Thr Val Leu Phe Thr Leu Leu Leu Val Phe Ile  
 20 25 30  
 Ile Val Pro Ala Ile Phe Gly Val Ser Phe Gly Ile Arg Lys Leu  
 35 40 45  
 Tyr Met Lys Ser Leu Leu Lys Ile Phe Ala Trp Ala Thr Leu Arg  
 50 55 60  
 Met Glu Arg Gly Ala Lys Glu Lys Asn His Gln Leu Tyr Lys Pro  
 65 70 75



Tyr Thr Asn Gly	Ile	Ile	Ala	Lys	Asp	Pro	Thr	Ser	Leu	Glu	Glu
	80					85					90
Glu Ile Lys Glu	Ile	Arg	Arg	Ser	Gly	Ser	Ser	Lys	Ala	Leu	Asp
	95					100					105
Asn Thr Pro Glu	Phe	Glu	Leu	Ser	Asp	Ile	Phe	Tyr	Phe	Cys	Arg
	110					115					120
Lys Gly Met Glu	Thr	Ile	Met	Asp	Asp	Glu	Val	Thr	Lys	Arg	Phe
	125					130					135
Ser Ala Glu Glu	Leu	Glu	Ser	Trp	Asn	Leu	Leu	Ser	Arg	Thr	Asn
	140					145					150
Tyr Asn Phe Gln	Tyr	Ile	Ser	Leu	Arg	Leu	Thr	Val	Leu	Trp	Gly
	155					160					165
Leu Gly Val Leu	Ile	Arg	Tyr	Cys	Phe	Leu	Leu	Pro	Leu	Arg	Ile
	170					175					180
Ala Leu Ala Phe	Thr	Gly	Ile	Ser	Leu	Leu	Val	Val	Gly	Thr	Thr
	185					190					195
Val Val Gly Tyr	Leu	Pro	Asn	Gly	Arg	Phe	Lys	Glu	Phe	Met	Ser
	200					205					210
Lys His Val His	Leu	Met	Cys	Tyr	Arg	Ile	Cys	Val	Arg	Ala	Leu
	215					220					225
Thr Ala Ile Ile	Thr	Tyr	His	Asp	Arg	Glu	Asn	Arg	Pro	Arg	Asn
	230					235					240
Gly Gly Ile Cys	Val	Ala	Asn	His	Thr	Ser	Pro	Ile	Asp	Val	Ile
	245					250					255
Ile Leu Ala Ser	Asp	Gly	Tyr	Tyr	Ala	Met	Val	Gly	Gln	Val	His
	260					265					270
Gly Gly Leu Met	Gly	Val	Ile	Gln	Arg	Ala	Met	Val	Lys	Ala	Cys
	275					280					285
Pro His Val Trp	Phe	Glu	Arg	Ser	Glu	Val	Lys	Asp	Arg	His	Leu
	290					295					300
Val Ala Lys Arg	Leu	Thr	Glu	His	Val	Gln	Asp	Lys	Ser	Lys	Leu
	305					310					315
Pro Ile Leu Ile	Phe	Pro	Glu	Gly	Thr	Cys	Ile	Asn	Asn	Thr	Ser
	320					325					330
Val Met Met Phe	Lys	Lys	Gly	Ser	Phe	Glu	Ile	Gly	Ala	Thr	Val
	335					340					345
Tyr Pro Val Ala	Ile	Lys	Tyr	Asp	Pro	Gln	Phe	Gly	Asp	Ala	Phe
	350					355					360
Trp Asn Ser Ser	Lys	Tyr	Gly	Met	Val	Thr	Tyr	Leu	Leu	Arg	Met
	365					370					375
Met Thr Ser Trp	Ala	Ile	Val	Cys	Ser	Val	Trp	Tyr	Leu	Pro	Pro
	380					385					390

Met Thr Arg Glu Ala Asp Glu Asp Ala Val Gln Phe Ala Asn Arg  
 395 400  
 Val Lys Ser Ala Ile Ala Arg Gln Gly Gly Leu Val Asp Leu Leu  
 410 415 420  
 Trp Asp Gly Gly Leu Lys Arg Glu Lys Val Lys Asp Thr Phe Lys  
 425 430 435  
 Glu Glu Gln Gln Lys Leu Tyr Ser Lys Met Ile Val Gly Asn His  
 440 445 450  
 Lys Asp Arg Ser Arg Ser  
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<210> 249  
 <211> 1103  
 <212> DNA  
 <213> Homo sapiens

<400> 249  
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 gccctcgga ccctcgccct ccacacctgg caggcccagg ctgttccac 150  
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 gttgtgcaga ggagatggag gagaaggcag cccccctgct aaaggaggaa 250  
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 ctgggaggac aagcgtcgag ggcttacctt gccccttgcc tcaaaagccc 350  
 agaatggaat agccattatg gtctacacca actcatcgaa cactttgtac 400  
 tgggagttga atcaggccgt gcggacgggc ggaggctccc gggagctcta 450  
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 cagcagggct gagggaaact tgctatgtga tggggacttc ctgggacaag 1000  
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gacatggagt tttattgagg tagctacgtg attaaatggt attgcagtgt 1100

gga 1103

<210> 250

<211> 240

<212> PRT

<213> Homo sapiens

<400> 250

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1 5 10 15

His Thr Trp Gln Ala Gln Ala Val Pro Thr Ile Leu Pro Leu Gly  
20 25 30

Leu Ala Pro Asp Thr Phe Asp Asp Thr Tyr Val Gly Cys Ala Glu  
35 40 45

Glu Met Glu Glu Lys Ala Ala Pro Leu Leu Lys Glu Glu Met Ala  
50 55 60

His His Ala Leu Leu Arg Glu Ser Trp Glu Ala Ala Gln Glu Thr  
65 70 75

Trp Glu Asp Lys Arg Arg Gly Leu Thr Leu Pro Pro Gly Phe Lys  
80 85 90

Ala Gln Asn Gly Ile Ala Ile Met Val Tyr Thr Asn Ser Ser Asn  
95 100 105

Thr Leu Tyr Trp Glu Leu Asn Gln Ala Val Arg Thr Gly Gly Gly  
110 115 120

Ser Arg Glu Leu Tyr Met Arg His Phe Pro Phe Lys Ala Leu His  
125 130 135

Phe Tyr Leu Ile Arg Ala Leu Gln Leu Leu Arg Gly Ser Gly Gly  
140 145 150

Cys Ser Arg Gly Pro Gly Glu Val Val Phe Arg Gly Val Gly Ser  
155 160 165

Leu Arg Phe Glu Pro Lys Arg Leu Gly Asp Ser Val Arg Leu Gly  
170 175 180

Gln Phe Ala Ser Ser Ser Leu Asp Lys Ala Val Ala His Arg Phe  
185 190 195

Gly Glu Lys Arg Arg Gly Cys Val Ser Ala Pro Gly Val Gln Leu  
200 205 210

Gly Ser Gln Ser Glu Gly Ala Ser Ser Leu Pro Pro Trp Lys Thr  
215 220 225

Leu Leu Leu Ala Pro Gly Glu Phe Gln Leu Ser Gly Val Gly Pro  
230 235 240

<210> 251

<211> 50

<212> DNA

<213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 251  
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 <210> 252  
 <211> 1076  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 252  
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 caacatgcct caccctcatc tatatccttt ggcagctcac agggtcagca 100  
 gctctggac cctgaaaga gctggtcggt tccgttgggt gggccgtgac 150  
 tttccccctg aagtccaaag taaagcaagt tgactctatt gtctggacct 200  
 tcaacacaac cctcttgtc accatacagc cagaaggggg cactatcata 250  
 gtgacccaaa atcgtaatat ggagagagta gacttcccag atggaggcta 300  
 ctccctgaag ctacagcaaac tgaagaagaa tgactcaggg atctactatg 350  
 tggggatata cagctcatca ctccagcagc cctccaccga ggagtacgtg 400  
 ctgcattgtc acgagcacct gtcaaacctt aaagtcacca tgggtctgca 450  
 gagcaataag aatggcacct gtgtgaccaa tctgacatgc tgcattggaac 500  
 atggggaaga ggatgtgatt tatacctgga agggccctgg gcaagcagcc 550  
 aatgagtgcc ataattgggtc catcctcccc atctcctgga gatggggaga 600  
 aagtgatatg accttcatct gcgttgccag gaaccctgtc agcagaaact 650  
 tctcaagccc catccttgcc aggaagctct gtgaaggtgc tgctgatgac 700  
 ccagattcct ccattggtcct cctgtgtctc ctgttgggtc cctcctgtct 750  
 cagtcctctt gtactggggc tatctctttg gttctgaag agagagagac 800  
 aagaagagta cattgaagag aagaagagag tggacatttg tcgggaaact 850  
 cctaacatat gccccattc tggagagaac acagagtacg acacaatccc 900  
 tcacactaat agaacaatcc taaaggaaga tccagcaaat acggtttact 950  
 ccactgtgga aataccgaaa aagatggaaa atccccactc actgctcaag 1000  
 atgccagaca caccaaggct atttgcctat gagaatgtta tctagacagc 1050  
 agtgactccc octaagtctc tgctca 1076  
  
 <210> 253  
 <211> 335  
 <212> PRT  
 <213> Homo sapiens  
  
 <400> 253  
 Met Ala Gly Ser Pro Thr Cys Leu Thr Leu Ile Tyr Ile Leu Trp

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Gln Leu Thr Gly	Ser Ala Ala Ser Gly	Pro Val Lys Glu Leu	Val 30
	20	25	
Gly Ser Val Gly	Gly Ala Val Thr Phe	Pro Leu Lys Ser Lys	Val 45
	35	40	
Lys Gln Val Asp	Ser Ile Val Trp Thr	Phe Asn Thr Thr Pro	Leu 60
	50	55	
Val Thr Ile Gln	Pro Glu Gly Gly Thr	Ile Ile Val Thr Gln	Asn 75
	65	70	
Arg Asn Arg Glu	Arg Val Asp Phe Pro	Asp Gly Gly Tyr Ser	Leu 90
	80	85	
Lys Leu Ser Lys	Leu Lys Lys Asn Asp	Ser Gly Ile Tyr Tyr	Val 105
	95	100	
Gly Ile Tyr Ser	Ser Ser Leu Gln Gln	Pro Ser Thr Gln Glu	Tyr 120
	110	115	
Val Leu His Val	Tyr Glu His Leu Ser	Lys Pro Lys Val Thr	Met 135
	125	130	
Gly Leu Gln Ser	Asn Lys Asn Gly Thr	Cys Val Thr Asn Leu	Thr 150
	140	145	
Cys Cys Met Glu	His Gly Glu Glu Asp	Val Ile Tyr Thr Trp	Lys 165
	155	160	
Ala Leu Gly Gln	Ala Ala Asn Glu Ser	His Asn Gly Ser Ile	Leu 180
	170	175	
Pro Ile Ser Trp	Arg Trp Gly Glu Ser	Asp Met Thr Phe Ile	Cys 195
	185	190	
Val Ala Arg Asn	Pro Val Ser Arg Asn	Phe Ser Ser Pro Ile	Leu 210
	200	205	
Ala Arg Lys Leu	Cys Glu Gly Ala Ala	Asp Asp Pro Asp Ser	Ser 225
	215	220	
Met Val Leu Leu	Cys Leu Leu Leu Val	Pro Leu Leu Leu Ser	Leu 240
	230	235	
Phe Val Leu Gly	Leu Phe Leu Trp Phe	Leu Lys Arg Glu Arg	Gln 255
	245	250	
Glu Glu Tyr Ile	Glu Glu Lys Lys Arg	Val Asp Ile Cys Arg	Glu 270
	260	265	
Thr Pro Asn Ile	Cys Pro His Ser Gly	Glu Asn Thr Glu Tyr	Asp 285
	275	280	
Thr Ile Pro His	Thr Asn Arg Thr Ile	Leu Lys Glu Asp Pro	Ala 300
	290	295	
Asn Thr Val Tyr	Ser Thr Val Glu Ile	Pro Lys Lys Met Glu	Asn 315
	305	310	
Pro His Ser Leu	Leu Thr Met Pro Asp	Thr Pro Arg Leu Phe	Ala

Tyr Glu Asn Val Ile  
335

<210> 254  
<211> 1053  
<212> DNA  
<213> Homo sapiens

<400> 254  
ctggttcccc aacatgcctc accctcatct atatcctttg gcagctcaca 50  
gggtcagcag cctctggacc cgtgaaagag ctggtcggtt ccgttggtgg 100  
ggcgtgact ttccccctga agtccaaagt aaagcaagtt gactctattg 150  
tctggacett caacacaacc cctcttgta ccatcacagc agaagggggc 200  
actatcatag tgaccacaaa tcgtaatatg gagagagtag acttcccaga 250  
tggaggctac tccctgaagc tcagcaaat gaagaagaat gactcaggga 300  
tctactatgt ggggatatac agctcatcac tccagcagcc ctccaccaga 350  
gagtacgtgc tgcattgtcta cgagcacctg tcaaagccta aagtcacatt 400  
gggtctgcag agcaataaga atggcacctg tgtgaccaat ctgacattgt 450  
gcattgaaca tggggaagag gatgtgattt atacctggaa ggccctgggg 500  
caagcagcca atgagtccca taatgggtcc atcctcccca tctcctggag 550  
atggggagaa agtgatatga cttcatctg cgttgccagg aacctgtca 600  
gcagaaactt ctcaagcccc atccttgcca ggaagctctg tgaagtgct 650  
gtgatgacc cagatttcctc catggtctc ctgtgtctcc tgttggtgcc 700  
ctcctgtctc agtctctttg tactggggct atttcttttg tttctgaaga 750  
gagagagaca agaagagtag attgaagaga agaagagagt ggacatttgg 800  
cgggaaactc ctaacatatg ccccatctc ggagagaaca cagagtacga 850  
cacaatcct cactactaata gaacaatcct aaagggaagt ccagcaata 900  
cggtttactc cactgtggaa ataccgaaaa agatggaaaa tccccactca 950  
ctgtcacga tgccagacac accaaggcta ttgtcctatg agaattgtat 1000  
ctagacagca gtgcactccc ctaagtctct gctcaaaaaa aaaaaaaaaa 1050  
aaa 1053

<210> 255  
<211> 860  
<212> DNA  
<213> Homo sapiens

<400> 255  
gaaagacgtg gtcctgacag acagacaatc ctattcccta ccaaatgaa 50

gatgctgctg ctgctgtgtt tgggactgac cctagtctgt gtccatgcag 100  
 aagaagctag ttctacgga aggaacttta atgtagaaaa gattaatggg 150  
 gaatggcata ctattatcct ggcctctgac aaaagagaaa agatagaaga 200  
 acatggcaac tttagacttt ttctggagca aatccatgto ttggagaatt 250  
 ccttagttct taaagtcct actgtaagag atgaagatg ctccgaatta 300  
 tctatggttg ctgacaaaac agaaaaggct ggtgaatatt ctgtgacgta 350  
 tgatggattc aatacattta ctatacctaa gacagactat gataactttc 400  
 ttatggctca cctcattaac gaaaaggatg gggaaacctt ccagctgatg 450  
 gggctctatg gccgagaacc agatttgagt tcagacatca aggaaagggt 500  
 tgcacaacta tgtgaggagc atggaatcct tagagaaaat atcattgacc 550  
 tatccaatgc caatcgctgc ctccaggccc gagaatgaag aatggcctga 600  
 gcctccagtg ttgagtggac acttctcacc aggactccac catcatccct 650  
 tcctatccat acagcatccc cagtataaat tctgtgatct gcattccatc 700  
 ctgtctcact gagaagtcca attccagtct atcaacatgt tacctaggat 750  
 acctcatcaa gaatcaaaga cttctttaaa tttctctttg atacaccctt 800  
 gacaattttt catgaaatta ttctctctcc tgttcaataa atgattaccc 850  
 ttgcacttaa 860

<210> 256  
 <211> 180  
 <212> PRT  
 <213> Homo sapiens

<400> 256  
 Met Lys Met Leu Leu Leu Cys Leu Gly Leu Thr Leu Val Cys  
 1 5 10 15  
 Val His Ala Glu Glu Ala Ser Ser Thr Gly Arg Asn Phe Asn Val  
 20 25 30  
 Glu Lys Ile Asn Gly Glu Trp His Thr Ile Leu Ala Ser Asp  
 35 40 45  
 Lys Arg Glu Lys Ile Glu Glu His Gly Asn Phe Arg Leu Phe Leu  
 50 55 60  
 Glu Gln Ile His Val Leu Glu Asn Ser Leu Val Leu Lys Val His  
 65 70 75  
 Thr Val Arg Asp Glu Glu Cys Ser Glu Leu Ser Met Val Ala Asp  
 80 85 90  
 Lys Thr Glu Lys Ala Gly Glu Tyr Ser Val Thr Tyr Asp Gly Phe  
 95 100 105  
 Asn Thr Phe Thr Ile Pro Lys Thr Asp Tyr Asp Asn Phe Leu Met  
 110 115 120

Ala His Leu Ile Asn Glu Lys Asp Gly Glu Thr Phe Gln Leu Met  
 125 130  
 Gly Leu Tyr Gly Arg Glu Pro Asp Leu Ser Ser Asp Ile Lys Glu  
 140 145 150  
 Arg Phe Ala Gln Leu Cys Glu Glu His Gly Ile Leu Arg Glu Asn  
 155 160 165  
 Ile Ile Asp Leu Ser Asn Ala Asn Arg Cys Leu Gln Ala Arg Glu  
 170 175 180

<210> 257  
 <211> 766  
 <212> DNA  
 <213> Homo sapiens

<400> 257  
 ggctcgagcg tttctgagcc aggggtgacc atgacctgct gcgaaggatg 50  
 gacatcctgc aatggattca gcctgctggt tctactgctg ttaggagtag 100  
 ttctcaatgc gatacctcta attgtcagct tagttgagga agaccaattt 150  
 tctcaaaacc ccatctcttg ctttgagtgg tggttccagg gaattatagg 200  
 agcagggtctg atggccattc cagcaacaac aatgtccttg acagcaagaa 250  
 aaagagcgtg ctgcaacaac agaactggaa tgtttctttc atcatttttc 300  
 agtgtgatca cagtcattgg tgctctgtat tgcagtctga tatccatcca 350  
 ggctctctta aaaggtcctc tcatgtgtaa ttctccaagg aacagtaatg 400  
 ccaattgtga attttcattg aaaaacatca gtgacattca tccagaatcc 450  
 ttcaacttgc agtggttttt caatgactct tgtgcacctc ctactggttt 500  
 caataaacc accagtaacg acaccatggc gagtggtgag agagcatcta 550  
 gtttccactt cgattctgaa gaaaacaaac atagggttat ccacttctca 600  
 gtatttttag gtctattgct tgttggaatt ctggaggtcc tgtttgggtc 650  
 cagtcagata gtcacggtt tccttggtcg tctgtgtgga gtctctaagc 700  
 gaagaagtca aattgtgtag tttaatggga ataaaatgta agtatcagta 750  
 gtttgaaaaa aaaaaa 766

<210> 258  
 <211> 229  
 <212> PRT  
 <213> Homo sapiens

<400> 258  
 Met Thr Cys Cys Glu Gly Trp Thr Ser Cys Asn Gly Phe Ser Leu  
 1 5 10  
 Leu Val Leu Leu Leu Gly Val Val Leu Asn Ala Ile Pro Leu  
 20 25 30  
 Ile Val Ser Leu Val Glu Glu Asp Gln Phe Ser Gln Asn Pro Ile



	35	40	45
Ser Cys Phe Glu Trp Trp Phe Pro Gly Ile Ile Gly Ala Gly Leu	50	55	60
Met Ala Ile Pro Ala Thr Thr Met Ser Leu Thr Ala Arg Lys Arg	65	70	75
Ala Cys Cys Asn Asn Arg Thr Gly Met Phe Leu Ser Ser Phe Phe	80	85	90
Ser Val Ile Thr Val Ile Gly Ala Leu Tyr Cys Met Leu Ile Ser	95	100	105
Ile Gln Ala Leu Leu Lys Gly Pro Leu Met Cys Asn Ser Pro Ser	110	115	120
Asn Ser Asn Ala Asn Cys Glu Phe Ser Leu Lys Asn Ile Ser Asp	125	130	135
Ile His Pro Glu Ser Phe Asn Leu Gln Trp Phe Phe Asn Asp Ser	140	145	150
Cys Ala Pro Pro Thr Gly Phe Asn Lys Pro Thr Ser Asn Asp Thr	155	160	165
Met Ala Ser Gly Trp Arg Ala Ser Ser Phe His Phe Asp Ser Glu	170	175	180
Glu Asn Lys His Arg Leu Ile His Phe Ser Val Phe Leu Gly Leu	185	190	195
Leu Leu Val Gly Ile Leu Glu Val Leu Phe Gly Leu Ser Gln Ile	200	205	210
Val Ile Gly Phe Leu Gly Cys Leu Cys Gly Val Ser Lys Arg Arg	215	220	225
Ser Gln Ile Val			

<210> 259  
 <211> 434  
 <212> DNA  
 <213> Homo sapiens

<400> 259  
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 caccatgagg ctgtcagtggt gtctcctgat ggtctcgtg gccctttgct 100  
 gctaccaggc ccatgctctt gtctgcccag ctgttgcttc tgagatcaca 150  
 gtctttttat tcttaagtga cgtgoggyta aacotccaag ttgccccaaact 200  
 taatccacct ccagaagetc ttgcagccaa gttggaagtg aagcactgca 250  
 ccgatcagat atcttttaag aaacgactct cattgaaaaa gtcctggttg 300  
 aaatagttaa aaaatgtggt gtgtgacatg taaaaatgct caacotggtt 350  
 tccaaagtct ttcaacgaca cctgatctt cactaaaaat tgtaaagggt 400

tcaacacggtt gctttaataa atcacttgcc ctgc 434

<210> 260

<211> 83

<212> PRT

<213> Homo sapiens

<400> 260

Met Arg Leu Ser Val Cys Leu Leu Met Val Ser Leu Ala Leu Cys  
1 5 10 15

Cys Tyr Gln Ala His Ala Leu Val Cys Pro Ala Val Ala Ser Glu  
20 25 30

Ile Thr Val Phe Leu Phe Leu Ser Asp Ala Ala Val Asn Leu Gln  
35 40 45

Val Ala Lys Leu Asn Pro Pro Pro Glu Ala Leu Ala Ala Lys Leu  
50 55 60

Glu Val Lys His Cys Thr Asp Gln Ile Ser Phe Lys Lys Arg Leu  
65 70 75

Ser Leu Lys Lys Ser Trp Trp Lys  
80

<210> 261

<211> 636

<212> DNA

<213> Homo sapiens

<400> 261

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cgccccagtg cctctcccc tgcagccctg cccctcgaac tgtgacatgg 200

agagagtgc cctggccctt ctctactgag caggcctgac tgccttgga 250

gccaatgacc catttgccaa taaagacgat ccttctact atgactggaa 300

aaacctgcag ctgagcggac tgatctgcgg agggctcctg gccattgctg 350

ggatcgcggc agttctgagt ggcaaatgca aatacaagag cagccagaag 400

cagcacagtc ctgtacctga gaaggccatc ccaactcatc ctccaggctc 450

tgccactact tgctgagcac aggactggcc tccagggatg gcctgaagcc 500

taaacctggc ccccagcacc tctctccctg ggaggcctta tctcaagga 550

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<210> 262

<211> 89

<212> PRT

<213> Homo sapiens

<400> 262

Met Glu Arg Val Thr Leu Ala Leu Leu Leu Leu Ala Gly Leu Thr  
1 5 10 15  
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20 25 30  
Tyr Tyr Asp Trp Lys Asn Leu Gln Leu Ser Gly Leu Ile Cys Gly  
35 40 45  
Gly Leu Leu Ala Ile Ala Gly Ile Ala Ala Val Leu Ser Gly Lys  
50 55 60  
Cys Lys Tyr Lys Ser Ser Gln Lys Gln His Ser Pro Val Pro Glu  
65 70 75  
Lys Ala Ile Pro Leu Ile Thr Pro Gly Ser Ala Thr Thr Cys  
80 85

<210> 263

<211> 1676

<212> DNA

<213> Homo sapiens

<400> 263

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actcctgctg ctggttggg gctcctggct actcgcccg atcctggtt 150  
ggacctatgc cttctataac aactgccgcc ggctccagt tttccacag 200  
ccccaaaac ggaactggtt ttggggtoac ctgggctgta tcaactctac 250  
agaggagggg ttgaaggact cgaccagat gtcggccacc tattccoagg 300  
gctttacggg atggctgggt cccatcatcc ccttcatcgt tttatgccac 350  
cctgacacca tccggtctat caccaatgcc tcagctgcca ttgcacccaa 400  
ggataatctc ttcacaggt tctgaagcc ctggctggga gaagggatac 450  
tgctgagtgg cggtgacaag tggagccgcc accgtcgat gctgacgcc 500  
gccttcatt tcaacatcct gaagtcctat ataacgatct tcaacaagag 550  
tgcaaacatc atgcttgaca agtggcagca cctggcctca gagggcagca 600  
gtcgtctgga catgtttgag cacatcagcc tcatgacctt ggacagtcta 650  
cagaaatgca tcttcagett tgacagccat tgtcaggaga ggcccagtga 700  
atatattgcc accatcttgg agtcagtgcc cttgttagag aaaagaagcc 750  
agcatatcct ccagcacatg gactttctgt attacctctc ccatgacggg 800  
cggcgcttcc acagggcctg ccgcctgggt catgacttca cagacgctgt 850  
catccgggag cggcgctgca cctcccccac tcagggtatt gatgattttt 900  
tcaaagacaa agccaagtcc aagactttgg atttcattga tgtgcttctg 950

ctgagcaagg atgaagatgg gaaggcattg tcagatgagg atataagagc 1000  
 agaggctgac accttcatgt ttggaggcca tgacaccacg gccagtggcc 1050  
 tctctgggt cctgtacaac cttgcgaggc acccagaata ccaggagcgc 1100  
 tgccgacagg aggtgcaaga gcttctgaag gaccgcatc ctaaagagat 1150  
 tgaatgggac gacctggccc agctgccctt cctgaccatg tgcgtgaagg 1200  
 agagcctgag gttacatccc ccagctccct tcatctcccg atgtgcacc 1250  
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 cctcatcgat attatagggg tccatcacia cccaactgtg tggccggatc 1350  
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 tcacctctgg cttttattcc tttctcgcga gggcccagga actgcatcgg 1450  
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 tgcacttccg gttcctgccca gaccacactg agccccgcag gaagctggaa 1550  
 ttgatcatgc gcgccgaggg cgggctttgg ctgcgggtgg agccccgaa 1600  
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 gtcataaata aaacggtgct gtcaaa 1676

<210> 264  
 <211> 524  
 <212> PRT  
 <213> Homo sapiens

<400> 264  
 Met Ser Leu Leu Ser Leu Pro Trp Leu Gly Leu Arg Pro Val Ala  
 1 5 10 15  
 Met Ser Pro Trp Leu Leu Leu Leu Val Val Gly Ser Trp Leu  
 20 25 30  
 Leu Ala Arg Ile Leu Ala Trp Thr Tyr Ala Phe Tyr Asn Asn Cys  
 35 40 45  
 Arg Arg Leu Gln Cys Phe Pro Gln Pro Pro Lys Arg Asn Trp Phe  
 50 55 60  
 Trp Gly His Leu Gly Leu Ile Thr Pro Thr Glu Glu Gly Leu Lys  
 65 70 75  
 Asp Ser Thr Gln Met Ser Ala Thr Tyr Ser Gln Gly Phe Thr Val  
 80 85 90  
 Trp Leu Gly Pro Ile Ile Pro Phe Ile Val Leu Cys His Pro Asp  
 95 100 105  
 Thr Ile Arg Ser Ile Thr Asn Ala Ser Ala Ala Ile Ala Pro Lys  
 110 115 120  
 Asp Asn Leu Phe Ile Arg Phe Leu Lys Pro Trp Leu Gly Glu Gly  
 125 130 135

Ile	Leu	Leu	Ser	Gly	Gly	Asp	Lys	Trp	Ser	Arg	His	Arg	Arg	Met
				140					145					150
Leu	Thr	Pro	Ala	Phe	His	Phe	Asn	Ile	Leu	Lys	Ser	Tyr	Ile	Thr
				155					160					165
Ile	Phe	Asn	Lys	Ser	Ala	Asn	Ile	Met	Leu	Asp	Lys	Trp	Gln	His
				170					175					180
Leu	Ala	Ser	Glu	Gly	Ser	Ser	Arg	Leu	Asp	Met	Phe	Glu	His	Ile
				185					190					195
Ser	Leu	Met	Thr	Leu	Asp	Ser	Leu	Gln	Lys	Cys	Ile	Phe	Ser	Phe
				200					205					210
Asp	Ser	His	Cys	Gln	Glu	Arg	Pro	Ser	Glu	Tyr	Ile	Ala	Thr	Ile
				215					220					225
Leu	Glu	Leu	Ser	Ala	Leu	Val	Glu	Lys	Arg	Ser	Gln	His	Ile	Leu
				230					235					240
Gln	His	Met	Asp	Phe	Leu	Tyr	Tyr	Leu	Ser	His	Asp	Gly	Arg	Arg
				245					250					255
Phe	His	Arg	Ala	Cys	Arg	Leu	Val	His	Asp	Phe	Thr	Asp	Ala	Val
				260					265					270
Ile	Arg	Glu	Arg	Arg	Arg	Thr	Leu	Pro	Thr	Gln	Gly	Ile	Asp	Asp
				275					280					285
Phe	Phe	Lys	Asp	Lys	Ala	Lys	Ser	Lys	Thr	Leu	Asp	Phe	Ile	Asp
				290					295					300
Val	Leu	Leu	Leu	Ser	Lys	Asp	Glu	Asp	Gly	Lys	Ala	Leu	Ser	Asp
				305					310					315
Glu	Asp	Ile	Arg	Ala	Glu	Ala	Asp	Thr	Phe	Met	Phe	Gly	Gly	His
				320					325					330
Asp	Thr	Thr	Ala	Ser	Gly	Leu	Ser	Trp	Val	Leu	Tyr	Asn	Leu	Ala
				335					340					345
Arg	His	Pro	Glu	Tyr	Gln	Glu	Arg	Cys	Arg	Gln	Glu	Val	Gln	Glu
				350					355					360
Leu	Leu	Lys	Asp	Arg	Asp	Pro	Lys	Glu	Ile	Glu	Trp	Asp	Asp	Leu
				365					370					375
Ala	Gln	Leu	Pro	Phe	Leu	Thr	Met	Cys	Val	Lys	Glu	Ser	Leu	Arg
				380					385					390
Leu	His	Pro	Pro	Ala	Pro	Phe	Ile	Ser	Arg	Cys	Cys	Thr	Gln	Asp
				395					400					405
Ile	Val	Leu	Pro	Asp	Gly	Arg	Val	Ile	Pro	Lys	Gly	Ile	Thr	Cys
				410					415					420
Leu	Ile	Asp	Ile	Ile	Gly	Val	His	His	Asn	Pro	Thr	Val	Trp	Pro
				425					430					435
Asp	Pro	Glu	Val	Tyr	Asp	Pro	Phe	Arg	Phe	Asp	Pro	Glu	Asn	Ser
				440					445					450

Lys	Gly	Arg	Ser	Pro	Leu	Ala	Phe	Ile	Pro	Phe	Ser	Ala	Gly	Pro
				455					460					465
Arg	Asn	Cys	Ile	Gly	Gln	Ala	Phe	Ala	Met	Ala	Glu	Met	Lys	Val
				470					475					480
Val	Leu	Ala	Leu	Met	Leu	Leu	His	Phe	Arg	Phe	Leu	Pro	Asp	His
				485					490					495
Thr	Glu	Pro	Arg	Arg	Lys	Leu	Glu	Leu	Ile	Met	Arg	Ala	Glu	Gly
				500					505					510
Gly	Leu	Trp	Leu	Arg	Val	Glu	Pro	Leu	Asn	Val	Gly	Leu	Gln	
				515					520					

<210> 265  
 <211> 584  
 <212> DNA  
 <213> Homo sapiens

<400> 265  
 caacagaagc caagaaggaa gccgtctatc ttgtggogat catgtataag 50  
 ctggcctcct gctgttttgc tttcacagga ttcttaaato ctctcttate 100  
 tttctctctc ctgactcca gggaaatata ctttcaacto tcagcacctc 150  
 atgaagacgc gcgcttaact cggaggagc tagaaagagc ttcccttcta 200  
 cagatatggc cagagatgct gggtgcagaa agaggggata ttctcaggaa 250  
 agcagactca agtaccaaca tttttaaccc aagaggaaat ttgagaaagt 300  
 ttcaggattt ctctggacaa gatcctaaca ttttactgag tcactctttg 350  
 gccagaatct ggaaccata caagaaacgt gagactcctg attgcttctg 400  
 gaaatactgt gtctgaagtg aaataagcat ctgttagtca gctcagaaac 450  
 acccatctta gaatatgaaa aataacacaa tgcttgattt gaaaacagtg 500  
 tggagaaaaa ctaggcaaac tacaccctgt tcattgttac ctggaaaata 550  
 aatcctctat gttttgcaca aaaaaaaaaa aaaa 584

<210> 266  
 <211> 124  
 <212> PRT  
 <213> Homo sapiens

Met	Tyr	Lys	Leu	Ala	Ser	Cys	Cys	Leu	Leu	Phe	Thr	Gly	Phe	Leu
1				5						10				15
Asn	Pro	Leu	Leu	Ser	Leu	Pro	Leu	Leu	Asp	Ser	Arg	Glu	Ile	Ser
				20					25					30
Phe	Gln	Leu	Ser	Ala	Pro	His	Glu	Asp	Ala	Arg	Leu	Thr	Pro	Glu
				35					40					45
Glu	Leu	Glu	Arg	Ala	Ser	Leu	Leu	Gln	Ile	Leu	Pro	Glu	Met	Leu
				50					55					60

Gly Ala Glu Arg Gly Asp Ile Leu Arg Lys Ala Asp Ser Ser Thr  
65 70 75  
Asn Ile Phe Asn Pro Arg Gly Asn Leu Arg Lys Phe Gln Asp Phe  
80 85 90  
Ser Gly Gln Asp Pro Asn Ile Leu Leu Ser His Leu Leu Ala Arg  
95 100 105  
Ile Trp Lys Pro Tyr Lys Lys Arg Glu Thr Pro Asp Cys Phe Trp  
110 115 120  
Lys Tyr Cys Val

<210> 267  
<211> 654  
<212> DNA  
<213> Homo sapiens

<400> 267  
gaacattttt agttcccaag gaatgtacat cagccccacg gaagctaggc 50  
cacctctggg atgggggttc tggtttaaaa caaacgccag tcatctata 100  
taaggacctg acagccacca ggcaccacct cggccaggaa ctgcaggccc 150  
acctgtctgc aaccagctg aggccatgcc ctccccagg accgtctgca 200  
gcctctctgt cctcgcatg ctctggcttg acttggccat ggcaggctcc 250  
agcttctctga gccctgaaca ccagagagtc cagcagagaa aggagtcgaa 300  
gaagccacca gccaaagctgc agccccgagc tctagcaggc tggctccgcc 350  
cggaagatgg aggtcaagca gaaggggcag aggatgaact ggaagtccgg 400  
ttcaacgccc cctttgatgt tggaatcaag ctgtoagggg ttcaagtacca 450  
gcagcacagc caggccctgg ggaagtttct tcaggacatc ctctgggaag 500  
aggccaaaga ggccccagcc gacaagtgat cgccccacaag ccttactcac 550  
ctctctctaa gtttagaagc gctcatctgg cttttcgott gcttctgcag 600  
caactccac gactgttgta caagctcagg aggcgaataa atgttcaaac 650  
tgta 654

<210> 268  
<211> 117  
<212> PRT  
<213> Homo sapiens

<400> 268  
Met Pro Ser Pro Gly Thr Val Cys Ser Leu Leu Leu Leu Gly Met  
1 5 10 15  
Leu Trp Leu Asp Leu Ala Met Ala Gly Ser Ser Phe Leu Ser Pro  
20 25 30  
Glu His Gln Arg Val Gln Gln Arg Lys Glu Ser Lys Lys Pro Pro  
35 40 45

Ala	Lys	Leu	Gln	Pro	Arg	Ala	Leu	Ala	Gly	Trp	Leu	Arg	Pro	Glu
				50					55					60
Asp	Gly	Gly	Gln	Ala	Glu	Gly	Ala	Glu	Asp	Glu	Leu	Glu	Val	Arg
				65					70					75
Phe	Asn	Ala	Pro	Phe	Asp	Val	Gly	Ile	Lys	Leu	Ser	Gly	Val	Gln
				80					85					90
Tyr	Gln	Gln	His	Ser	Gln	Ala	Leu	Gly	Lys	Phe	Leu	Gln	Asp	Ile
				95					100					105
Leu	Trp	Glu	Glu	Ala	Lys	Glu	Ala	Pro	Ala	Asp	Lys			
				110					115					

<210> 269  
 <211> 1332  
 <212> DNA  
 <213> Homo sapiens

<400> 269  
 cggccacagc tggcatgctc tgcctgatcg ccatcctgct gtatgtcctc 50  
 gtccagtacc tcgtgaaccc cggggtgctc cgcacggacc ccagatgtca 100  
 agaatatgaa cactgggctg ctgttcctcc cctgttccc ggtgcagggt 150  
 cagaccctga tagtcgtgat catcggtatg ctctgtctcc tctgggactt 200  
 tcttggtctg gtgcacctgg gccagctgct catcttccac atctacctga 250  
 gtatgtcccc caccctaagc ccccgatccc cccaaggctg ggtggtcaga 300  
 gtgtgtcctc ttacacctct acttgagtat gtccttaacc ctgagcccc 350  
 cagcgcctgg gccagagtct ttgtcccccg tgtgogcatg tgttcagggt 400  
 cagcctctcc cagaagttag atcatggaca aaaagggcaa atcacaggaa 450  
 gaaattaaat ccatgaggac ccagcaggcc cagcaagaag ctgaactcac 500  
 gccgagacct gcaggagtgg tgccaggtgc ttgaagtaac aagtttaaaa 550  
 tgttcagaga caatggaatg gaatctatta ggcaagaaca ggacattatg 600  
 aaataaggac aggtgggactt ccaaaaacac aagtagaata tctaacaatg 650  
 aaatatatta caggcaggtc acccactaac caaacaactg aagcgagagc 700  
 tgtgtgtctg cttggtctca cagtgggcac agcggtaggc ggtcagtcac 750  
 gttgtgtaac gacggagggt aaactcccca gccccaagaa aacctgtgtt 800  
 ggaagtaaca acaacctccc tgcctctggc accagccgtt ttggtcatgg 850  
 tgggcccagc gcaaagcgtc ttccattctc tgggcagtggt tggcccgag 900  
 gctgtggcct ctcagggggt ttctgtggac acgggcagca gagtgtgtcc 950  
 aggccagccc ccaagaatgc cctgtctctg acagcttggt caacccttgg 1000  
 tcagggcaga gggagttggg tgggtcaggc tctgggctca cctccatctc 1050



cagagcatcc cctgcttgca gttgtggcaa gaacgccag ctacagaatga 1100  
 acacacccca ccaagagcct cctgttcat aaccacaggt taccctacaa 1150  
 accactgtcc ccacacaacc ctggggatgt tttaaaacac acacctctaa 1200  
 cgcatatctt acagtcactg ttgtcttgcc tgaggggtga attttttta 1250  
 atgaaagtgc aatgaaaatc actggattaa atcctacgga cacagagctg 1300  
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa 1332

<210> 270

<211> 142

<212> PRT

<213> Homo sapiens

<400> 270

Met	Asn	Thr	Trp	Leu	Leu	Phe	Leu	Pro	Leu	Phe	Pro	Val	Gln	Val
1				5					10				15	
Gln	Thr	Leu	Ile	Val	Val	Ile	Ile	Gly	Met	Leu	Val	Leu	Leu	Leu
				20					25					30
Asp	Phe	Leu	Gly	Leu	Val	His	Leu	Gly	Gln	Leu	Leu	Ile	Phe	His
				35					40					45
Ile	Tyr	Leu	Ser	Met	Ser	Pro	Thr	Leu	Ser	Pro	Arg	Ser	Pro	Gln
				50					55					60
Gly	Trp	Val	Val	Arg	Ala	Ala	His	Leu	Thr	Pro	Leu	Leu	Glu	Tyr
				65					70					75
Val	Pro	Asn	Pro	Glu	Pro	Pro	Thr	Pro	Gly	Ala	Arg	Val	Phe	Val
				80					85					90
Pro	Arg	Val	Arg	Met	Cys	Ser	Gly	Ser	Ala	Ser	Pro	Arg	Ser	Glu
				95					100					105
Ile	Met	Asp	Lys	Lys	Gly	Lys	Ser	Gln	Glu	Glu	Ile	Lys	Ser	Met
				110					115					120
Arg	Thr	Gln	Gln	Ala	Gln	Gln	Glu	Ala	Glu	Leu	Thr	Pro	Arg	Pro
				125					130					135
Ala	Gly	Val	Val	Pro	Gly	Ala								
				140										

<210> 271

<211> 1484

<212> DNA

<213> Homo sapiens

<400> 271

ggagtgcaga tggcatcctt cggttcttcc agacaagctg caagacgctg 50  
 accatggcca agatggagct ctogaaggcc ttctctggcc agcggacact 100  
 cctatctgcc atcctcagca tgctatcact cagcttctcc acaacatccc 150  
 tgctcagcaa ctactggttt gtgggcacac agaaggtgcc caagcccctg 200  
 tgcgagaaag gtctggcagc caagtgcctt gacatgccag tgtccctgga 250

tggagatacc aacacatcca cccaggaggt ggtacaatac aactgggaga 300  
 ctggggatga ccggttctcc ttccggagct tccggagtgg catgtggcta 350  
 tcctgtgagg aaactgtgga agaaccaggg gagaggtgcc gaagtttcat 400  
 tgaacttaca ccaccagcca agagaggtga gaaaggacta ctggaatttg 450  
 ccacgttgca aggcccatgt caccacactc tccgatttgg agggaagcgg 500  
 ttgatggaga aggccttcct cccctccctc cccttggggc tttgtggcaa 550  
 aaatcctatg gttatccctg ggaacgcaga tcacctacat cggacttcaa 600  
 ttcacagct tctcctgct actaacagac ttgtactca ctgggaacc 650  
 tgccctgtgg ctcaaaactga gcgcctttgc tctgtttcc tctgtcctgt 700  
 cagggtctcct ggggatgggt gccccatga tgtattcaca agtcttccaa 750  
 gcgactgtca acttgggtcc agaagactgg agaccacatg tttggaatta 800  
 tggctgggcc ttctacatgg cctggctctc cttcacctgc tgcattggct 850  
 cggctgtcac caccttcaac acgtacacca ggatgggtgt ggagttcaag 900  
 tgcaagcata gtaagagctt caaggaaaac ccgaactgcc taccacatca 950  
 ccatcagtgt ttccctcggc ggctgtcaag tgcagcccc accgtgggtc 1000  
 ctttgaccag ctaccaccag tatcataato agcccatcca ctctgtctct 1050  
 gagggagtgc acttctactc cgagctgcgg aacaagggat ttcaaaggag 1100  
 ggccagccag gagctgaaag aagcagttag gtcatctgta gaggaagagc 1150  
 agtgtttaga gttaagcggg tttggggagt aggcttgagc octacottac 1200  
 acgtctgctg attatcaaca tgtgcttaag ccaacatccg tctcttgagc 1250  
 atggttttta gaggctaaga ataaggctat gaataagggt tatctttaag 1300  
 tcctaaggga ttctgggtg ccaactgctc cttttctct acagctccat 1350  
 cttgtttcac ccaccccaca tctcacacat ccagaattcc cttctttact 1400  
 gatagtttct gtgccaggtt ctgggctaaa ccatggagat aaaaagaaga 1450  
 gtaaaatata cttcccgacc ttaaggatct gaaa 1484

<210> 272  
 <211> 285  
 <212> PRT  
 <213> Homo sapiens

<400> 272  
 Met Ala Lys Met Glu Leu Ser Lys Ala Phe Ser Gly Gln Arg Thr  
 1 5 10 15  
 Leu Leu Ser Ala Ile Leu Ser Met Leu Ser Leu Ser Phe Ser Thr  
 20 25 30  
 Thr Ser Leu Leu Ser Asn Tyr Trp Phe Val Gly Thr Gln Lys Val

35										40					45				
Pro	Lys	Pro	Leu	Cys	Glu	Lys	Gly	Leu	Ala	Ala	Lys	Cys	Phe	Asp					
				50					55					60					
Met	Pro	Val	Ser	Leu	Asp	Gly	Asp	Thr	Asn	Thr	Ser	Thr	Gln	Glu					
				65					70					75					
Val	Val	Gln	Tyr	Asn	Trp	Glu	Thr	Gly	Asp	Asp	Arg	Phe	Ser	Phe					
				80					85					90					
Arg	Ser	Phe	Arg	Ser	Gly	Met	Trp	Leu	Ser	Cys	Glu	Glu	Thr	Val					
				95					100					105					
Glu	Glu	Pro	Gly	Glu	Arg	Cys	Arg	Ser	Phe	Ile	Glu	Leu	Thr	Pro					
				110					115					120					
Pro	Ala	Lys	Arg	Gly	Glu	Lys	Gly	Leu	Leu	Glu	Phe	Ala	Thr	Leu					
				125					130					135					
Gln	Gly	Pro	Cys	His	Pro	Thr	Leu	Arg	Phe	Gly	Gly	Lys	Arg	Leu					
				140					145					150					
Met	Glu	Lys	Ala	Ser	Leu	Pro	Ser	Pro	Pro	Leu	Gly	Leu	Cys	Gly					
				155					160					165					
Lys	Asn	Pro	Met	Val	Ile	Pro	Gly	Asn	Ala	Asp	His	Leu	His	Arg					
				170					175					180					
Thr	Ser	Ile	His	Gln	Leu	Pro	Pro	Ala	Thr	Asn	Arg	Leu	Ala	Thr					
				185					190					195					
His	Trp	Glu	Pro	Cys	Leu	Trp	Ala	Gln	Thr	Glu	Arg	Leu	Cys	Cys					
				200					205					210					
Cys	Phe	Leu	Cys	Pro	Val	Arg	Ser	Pro	Gly	Asp	Gly	Gly	Pro	His					
				215					220					225					
Asp	Val	Phe	Thr	Ser	Leu	Pro	Ser	Asp	Cys	Gln	Leu	Gly	Ser	Arg					
				230					235					240					
Arg	Leu	Glu	Thr	Thr	Cys	Leu	Glu	Leu	Trp	Leu	Gly	Leu	Leu	His					
				245					250					255					
Gly	Leu	Ala	Leu	Leu	His	Leu	Leu	His	Gly	Val	Gly	Cys	His	His					
				260					265					270					
Leu	Gln	His	Val	His	Gln	Asp	Gly	Ala	Gly	Val	Gln	Val	Gln	Ala					
				275					280					285					

<210> 273  
 <211> 1158  
 <212> DNA  
 <213> Homo sapiens

<400> 273  
 aactggaagg aaagaaagaa aggtcagctt tggcccagat gtggttaccc 50  
 cttggtctcc tgtctttatg tctttctcct ctctctatcc tgtcatctcc 100  
 ctcaacttaag tctcaggcct gtcagcagct cctgtggaca ttgccatccc 150  
 ctctggttagc ctctcagaca aacaggacaa cctatgttat ggatgtttcc 200

accaaccagg gtagtggcat ggagcaccgt aaccatctgt gctctctgtga 250  
 tctctatgac agagccactt ctccacctct gaaatgttcc ctgctctgaa 300  
 atctggcatg agatggcaca ggtgaccacg cagaagccac cagaatcttg 350  
 cctgccttat tctctctccc aagtctgttc tcttattgtc aacctcagca 400  
 caacaggctg gcgccaatgg cattacagag aaagcaatct gtgtggctag 450  
 tgggcagatt accatgcaag cccagggaga aatggaggag cttttagtgc 500  
 acctcctgt cagccagtat taacatgtcc ctttccccct gccccgacct 550  
 agattcagga cattcgcccc tgtgtgccac caaaccagga ctttccctt 600  
 ggcttggcat ccttggtctt ctctgggtac ccagcaagac gtctgttcca 650  
 gggcagtgtg gcacttttca agctccgtta ctatggcgat ggccatgatg 700  
 ttacaatccc acttgctga ataataaagt gggaagggga agcagagggga 750  
 aatggggcca tgtgaatgca gctgctctgt tctccctacc ctgagggaaa 800  
 accaaagga agcaacagga acttctgcaa ctggttttta toggaagat 850  
 catctgcct gcagatgctg ttgaaggggc acaagaaatg tagctggaga 900  
 agattgatga aagtgcaggt gtgtaaggaa atagaacagt ctgctggag 950  
 tcagacctgg aattctgatt ccaaactctt tattactttg ggaagtctact 1000  
 cagcctcccc gtagecatct ccagggtgac ggaaccaggt gtattacctg 1050  
 ctggaaccaa ggaaactaac aatgtaggtt actagtgaat accccaatgg 1100  
 tttctccaat tatgccatg ccacaaaac aataaaacaa aattctctaa 1150  
 cactgaaa 1158

<210> 274  
 <211> 86  
 <212> PRT  
 <213> Homo sapiens

<400> 274  
 Met Trp Leu Pro Leu Gly Leu Leu Ser Leu Cys Leu Ser Pro Leu 15  
 1 5 10  
 Pro Ile Leu Ser Ser Pro Ser Leu Lys Ser Gln Ala Cys Gln Gln 30  
 20 25 30  
 Leu Leu Trp Thr Leu Pro Ser Pro Leu Val Ala Phe Arg Ala Asn 45  
 35 40 45  
 Arg Thr Thr Tyr Val Met Asp Val Ser Thr Asn Gln Gly Ser Gly 60  
 50 55 60  
 Met Glu His Arg Asn His Leu Cys Phe Cys Asp Leu Tyr Asp Arg 75  
 65 70 75  
 Ala Thr Ser Pro Pro Leu Lys Cys Ser Leu Leu 85  
 80 85

<210> 275  
<211> 2694  
<212> DNA  
<213> Homo sapiens

<400> 275  
gtagcgcgtc ttgggtctcc cggctgccc tgctgccc gccgcctcgg 50  
gtcgtggagc caggagcgac gtcaccgcca tggcaggcat caaagctttg 100  
attagtttgt cctttggagg agcaatcgga ctgatgtttt tgatgcttgg 150  
atgtgccott ccaatataca aaaaactctg gccoctcttt gttctatttt 200  
tttacctctt ttcacctatt ccatactgca tagcaagaag attagtggat 250  
gatacagatg ctatgagtaa cgttgtaag gaacttgcca tctttcttac 300  
aacgggcatt gtcgtgtcag cttttggact cctatttgta ttggccagag 350  
cacatctgat tgagtggga gcttgtgcac ttgttctcac aggaacaca 400  
gtcatctttg caactatact aggccttttc ttggtctttg gaagcaatga 450  
cgacttcagc tggcagcagt ggtgaaaaga aattactgaa ctattgtcaa 500  
atggacttcc tgtcatttgt tggccattca cgcacacagg agatggggga 550  
gtaaatgctg aatggtatag caagcctctt ggggggtatt taggtgctcc 600  
cttctcactt ttattgtaag catactattt tcacagagac ttgctgaagg 650  
attaaaagga ttttctcttt tggaaaagct tgactgattt cacacttacc 700  
tatagtatgc tttttggtt gtcctgctga atttaaatat ttatgtgttt 750  
ttcctgttag gttgattttt tttggaatca atatgcaatg ttaaacactt 800  
ttttaatgta atcatttgca ttggttagga attcagaatt cgcgcgctc 850  
tattactggt caagtacatc ttttctctta aaattattta gccctcatta 900  
ttacaaaaaa ttataaaaaa aggttttcag tcagtcagga tgacatcact 950  
cccaatgtta tgcagacata cagacgggtt gcatacgtta tagactgtat 1000  
actcagtgc aatatagctg catttatacc tcagaggggc caagtgttaa 1050  
tgcccatgcc ctccgttaag ggtgtgttgt ttacttgga gacagatgtt 1100  
ttgtggattg aaaattattt tatggaattg ctacagagga tgcttttct 1150  
tctcaattgt tagaagaatt tatgttaaac ttaaggtaa ggtgtgaaaa 1200  
acatttttga gataagggtt ttatttatgt ttattattgt tagagtgagt 1250  
tgcaatgttg gaagaaatga cattgaaatt ccagtttttg aatcctgttt 1300  
ctatttataa gtgaaatttg tgatctccta tcaaccttcc atgttttacc 1350  
ctgttaaaaa ggacatacat ggaaccacta ctgatgaggg acagttgtat 1400  
gtttgcatca tatatgccag aaaaccttcc tctgttctct ccttttgact 1450

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<210> 276  
 <211> 131  
 <212> PRT  
 <213> Homo sapiens

<400> 276  
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 Asn Lys Tyr Trp Pro Leu Phe Val Leu Phe Phe Tyr Ile Leu Ser

	35		40		45
Pro Ile Pro Tyr	Cys Ile Ala Arg Arg	Leu Val Asp Asp Thr Arg			
	50	55	60		
Ala Met Ser Asn	Ala Cys Lys Glu Leu	Ala Ile Phe Leu Thr Thr			
	65	70	75		
Gly Ile Val Val	Ser Ala Phe Gly Leu	Pro Ile Val Phe Ala Arg			
	80	85	90		
Ala His Leu Ile	Glu Trp Gly Ala Cys	Ala Leu Val Leu Thr Gly			
	95	100	105		
Asn Thr Val Ile	Phe Ala Thr Ile Leu	Gly Phe Phe Leu Val Phe			
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	125	130			

<210> 277  
 <211> 4104  
 <212> DNA  
 <213> Homo sapiens

<400> 277  
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<210> 278  
 <211> 522  
 <212> PRT  
 <213> Homo sapiens

<400> 278

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Arg	Pro	Ser	Gly	Val	Val	Leu	Cys	Leu	Gly	Ala	Cys	Phe	Gln
			20						25				30
Met	Leu	Pro	Ala	Ala	Pro	Ser	Gly	Cys	Pro	Gln	Leu	Cys	Arg
			35					40					45
Glu	Gly	Arg	Leu	Leu	Tyr	Cys	Glu	Ala	Leu	Asn	Leu	Thr	Glu
			50					55					60
Pro	His	Asn	Leu	Ser	Gly	Leu	Leu	Gly	Leu	Ser	Leu	Arg	Tyr
			65					70					75
Ser	Leu	Ser	Glu	Leu	Arg	Ala	Gly	Gln	Phe	Thr	Gly	Leu	Met
			80					85					90
Leu	Thr	Trp	Leu	Tyr	Leu	Asp	His	Asn	His	Ile	Cys	Ser	Val
			95					100					105
Gly	Asp	Ala	Phe	Gln	Lys	Leu	Arg	Arg	Val	Lys	Glu	Leu	Thr
			110					115					120
Ser	Ser	Asn	Gln	Ile	Thr	Gln	Leu	Pro	Asn	Thr	Thr	Phe	Arg
			125					130					135
Met	Pro	Asn	Leu	Arg	Ser	Val	Asp	Leu	Ser	Tyr	Asn	Lys	Leu
			140					145					150
Ala	Leu	Ala	Pro	Asp	Leu	Phe	His	Gly	Leu	Arg	Lys	Leu	Thr
			155					160					165
Leu	His	Met	Arg	Ala	Asn	Ala	Ile	Gln	Phe	Val	Pro	Val	Arg
			170					175					180
Phe	Gln	Asp	Cys	Arg	Ser	Leu	Lys	Phe	Leu	Asp	Ile	Gly	Tyr
			185					190					195
Gln	Leu	Lys	Ser	Leu	Ala	Arg	Asn	Ser	Phe	Ala	Gly	Leu	Phe
			200					205					210
Leu	Thr	Glu	Leu	His	Leu	Glu	His	Asn	Asp	Leu	Val	Lys	Val
			215					220					225
Phe	Ala	His	Phe	Pro	Arg	Leu	Ile	Ser	Leu	His	Ser	Leu	Cys
			230					235					240
Arg	Arg	Asn	Lys	Val	Ala	Ile	Val	Val	Ser	Ser	Leu	Asp	Trp
			245					250					255
Trp	Asn	Leu	Glu	Lys	Met	Asp	Leu	Ser	Gly	Asn	Glu	Ile	Glu
			260					265					270
Met	Glu	Pro	His	Val	Phe	Glu	Thr	Val	Pro	His	Leu	Gln	Ser
			275					280					285

Gln	Leu	Asp	Ser	Asn	Arg	Leu	Thr	Tyr	Ile	Glu	Pro	Arg	Ile	Leu	290	295	300
Asn	Ser	Trp	Lys	Ser	Leu	Thr	Ser	Ile	Thr	Leu	Ala	Gly	Asn	Leu	305	310	315
Trp	Asp	Cys	Gly	Arg	Asn	Val	Cys	Ala	Leu	Ala	Ser	Trp	Leu	Ser	320	325	330
Asn	Phe	Gln	Gly	Arg	Tyr	Asp	Gly	Asn	Leu	Gln	Cys	Ala	Ser	Pro	335	340	345
Glu	Tyr	Ala	Gln	Gly	Glu	Asp	Val	Leu	Asp	Ala	Val	Tyr	Ala	Phe	350	355	360
His	Leu	Cys	Glu	Asp	Gly	Ala	Glu	Pro	Thr	Ser	Gly	His	Leu	Ser	365	370	375
Ser	Ala	Val	Thr	Asn	Arg	Ser	Asp	Leu	Gly	Pro	Pro	Ala	Ser	Ser	380	385	390
Ala	Thr	Thr	Leu	Ala	Asp	Gly	Gly	Glu	Gly	Gln	His	Asp	Gly	Thr	395	400	405
Phe	Glu	Pro	Ala	Thr	Val	Ala	Leu	Pro	Gly	Gly	Glu	His	Ala	Glu	410	415	420
Asn	Ala	Val	Gln	Ile	His	Lys	Val	Val	Thr	Gly	Thr	Met	Ala	Leu	425	430	435
Ile	Phe	Ser	Phe	Leu	Ile	Val	Val	Leu	Val	Leu	Tyr	Val	Ser	Trp	440	445	450
Lys	Cys	Phe	Pro	Ala	Ser	Leu	Arg	Gln	Leu	Arg	Gln	Cys	Phe	Val	455	460	465
Thr	Gln	Arg	Arg	Lys	Gln	Lys	Gln	Lys	Gln	Thr	Met	His	Gln	Met	470	475	480
Ala	Ala	Met	Ser	Ala	Gln	Glu	Tyr	Tyr	Val	Asp	Tyr	Lys	Pro	Asn	485	490	495
His	Ile	Glu	Gly	Ala	Leu	Val	Ile	Ile	Asn	Glu	Tyr	Gly	Ser	Cys	500	505	510
Thr	Cys	His	Gln	Gln	Pro	Ala	Arg	Glu	Cys	Glu	Val				515	520	

<210> 279

<211> 46

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 279

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<210> 280

<211> 709

<212> DNA

<213> Homo sapiens

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<210> 281

<211> 229

<212> PRT

<213> Homo sapiens

<400> 281

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Leu	Thr	Gln	Ala	Val	Ser	Lys	Leu	Trp	Val	Pro	Asn	Thr	Asp	Phe
				20					25					30
Asp	Val	Ala	Ala	Asn	Trp	Ser	Gln	Asn	Arg	Thr	Pro	Cys	Ala	Gly
				35					40					45
Gly	Ala	Val	Glu	Phe	Pro	Ala	Asp	Lys	Met	Val	Ser	Val	Leu	Val
				50					55					60
Gln	Glu	Gly	His	Ala	Val	Ser	Asp	Met	Leu	Leu	Pro	Leu	Asp	Gly
				65					70					75
Glu	Leu	Val	Leu	Ala	Ser	Gly	Ala	Gly	Phe	Gly	Val	Ser	Asp	Val
				80					85					90
Gly	Ser	His	Leu	Asp	Cys	Gly	Ala	Gly	Glu	Pro	Ala	Val	Phe	Arg
				95					100					105
Asp	Ser	Asp	Arg	Phe	Ser	Trp	His	Asp	Pro	His	Leu	Trp	Arg	Ser
				110					115					120
Gly	Asp	Glu	Ala	Pro	Gly	Leu	Phe	Phe	Val	Asp	Ala	Glu	Arg	Val
				125					130					135

Pro Cys Arg His Asp Asp Val Phe Phe Pro Pro Ser Ala Ser Phe  
140 145 150

Arg Val Gly Leu Gly Pro Gly Ala Ser Pro Val Arg Val Arg Ser  
155 160 165

Ile Ser Ala Leu Gly Arg Thr Phe Thr Arg Asp Glu Asp Leu Ala  
170 175 180

Val Phe Leu Ala Ser Arg Ala Gly Arg Leu Arg Phe His Gly Pro  
185 190 195

Gly Ala Leu Ser Val Gly Pro Glu Asp Cys Ala Asp Pro Ser Gly  
200 205 210

Cys Val Cys Gly Asn Ala Glu Ala Gln Pro Trp Ile Cys Ala Ala  
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Leu Leu Gln Pro

<210> 282  
<211> 644  
<212> DNA  
<213> Homo sapiens

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<210> 283  
<211> 77  
<212> PRT  
<213> Homo sapiens

<400> 283  
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Cys Ser Ala Phe Trp Trp His Asn Lys Gly Leu Ala Leu Ile Phe  
35 40 45

Cys Ile Leu Gln Ser Leu Ala Leu Thr Trp Tyr Ser Leu Ser Phe  
50 55 60

Ile Pro Phe Ala Arg Asp Ala Val Lys Lys Cys Phe Ala Val Cys  
65 70 75

Leu Ala

<210> 284

<211> 2623

<212> DNA

<213> Homo sapiens

<400> 284

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atagctcaac	cattattaca	agcctaattg	tactttgaag	tggattttgca	1700
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ctgggaaacc	agttccaaac	atctgcagaa	accattaagc	agttacatat	1800
ttaggtatac	acacacacac	acacacacac	atcacacacac	acggacccaa	1850
atacttacac	ctgcaaaagg	ataaagatgt	gagagtatgt	ctccattgtt	1900
cactgtagca	tagggataga	taagatcctg	ctttattttg	acttggcgca	1950
gataatgtat	atatttagca	actttgcact	atgtaaagta	cottatatata	2000
tgcactttaa	atttctctcc	tgatgggtac	tttaatttga	aatgcacttt	2050
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catgtcacag	aatacttgtt	acgcatttgt	caaaactgaag	gaaatttcta	2150
ataatcccg	ataatgaaca	tagaaatcta	tctccataaa	ttgagagaag	2200
aagaaggtga	taagtgttga	aaattaaatg	tgataacctt	tgaaccttga	2250
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tagaagcaac	caggccaccat	ctcagcaatg	ttttctcttg	tttgtaatta	2550
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<210> 285

<211> 477  
 <212> PRT  
 <213> Homo sapiens

<400> 285

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				20					25					30	
Leu	Leu	Val	Ser	Phe	Asp	Gly	Phe	Arg	Trp	Asp	Tyr	Leu	Tyr	Lys	
				35					40					45	
Val	Pro	Thr	Pro	His	Phe	His	Tyr	Ile	Met	Lys	Tyr	Gly	Val	His	
				50					55					60	
Val	Lys	Gln	Val	Thr	Asn	Val	Phe	Ile	Thr	Lys	Thr	Tyr	Pro	Asn	
				65					70					75	
His	Tyr	Thr	Leu	Val	Thr	Gly	Leu	Phe	Ala	Glu	Asn	His	Gly	Ile	
				80					85					90	
Val	Ala	Asn	Asp	Met	Phe	Asp	Pro	Ile	Arg	Asn	Lys	Ser	Phe	Ser	
				95					100					105	
Leu	Asp	His	Met	Asn	Ile	Tyr	Asp	Ser	Lys	Phe	Trp	Glu	Glu	Ala	
				110					115					120	
Thr	Pro	Ile	Trp	Ile	Thr	Asn	Gln	Arg	Ala	Gly	His	Thr	Ser	Gly	
				125					130					135	
Ala	Ala	Met	Trp	Pro	Gly	Thr	Asp	Val	Lys	Ile	His	Lys	Arg	Phe	
				140					145					150	
Pro	Thr	His	Tyr	Met	Pro	Tyr	Asn	Glu	Ser	Val	Ser	Phe	Glu	Asp	
				155					160					165	
Arg	Val	Ala	Lys	Ile	Val	Glu	Trp	Phe	Thr	Ser	Lys	Glu	Pro	Ile	
				170					175					180	
Asn	Leu	Gly	Leu	Leu	Tyr	Trp	Glu	Asp	Pro	Asp	Asp	Met	Gly	His	
				185					190					195	
His	Leu	Gly	Pro	Asp	Ser	Pro	Leu	Met	Gly	Pro	Val	Ile	Ser	Asp	
				200					205					210	
Ile	Asp	Lys	Lys	Leu	Gly	Tyr	Leu	Ile	Gln	Met	Leu	Lys	Lys	Ala	
				215					220					225	
Lys	Leu	Trp	Asn	Thr	Leu	Asn	Leu	Ile	Ile	Thr	Ser	Asp	His	Gly	
				230					235					240	
Met	Thr	Gln	Cys	Ser	Glu	Glu	Arg	Leu	Ile	Glu	Leu	Asp	Gln	Tyr	
				245					250					255	
Leu	Asp	Lys	Asp	His	Tyr	Thr	Leu	Ile	Asp	Gln	Ser	Pro	Val	Ala	
				260					265					270	
Ala	Ile	Leu	Pro	Lys	Glu	Gly	Lys	Phe	Asp	Glu	Val	Tyr	Glu	Ala	
				275					280					285	
Leu	Thr	His	Ala	His	Pro	Asn	Leu	Thr	Val	Tyr	Lys	Lys	Glu	Asp	



290	295	300
Val Pro Glu Arg Trp His Tyr Lys Tyr	Asn Ser Arg Ile Gln Pro	
305	310	315
Ile Ile Ala Val Ala Asp Glu Gly Trp	His Ile Leu Gln Asn Lys	
320	325	330
Ser Asp Asp Phe Leu Leu Gly Asn His	Gly Tyr Asp Asn Ala Leu	
335	340	345
Ala Asp Met His Pro Ile Phe Leu Ala	His Gly Pro Ala Phe Arg	
350	355	360
Lys Asn Phe Ser Lys Glu Ala Met Asn Ser	Thr Asp Leu Tyr Pro	
365	370	375
Leu Leu Cys His Leu Leu Asn Ile Thr	Ala Met Pro His Asn Gly	
380	385	390
Ser Phe Trp Asn Val Gln Asp Leu Leu	Asn Ser Ala Met Pro Arg	
395	400	405
Val Val Pro Tyr Thr Gln Ser Thr Ile	Leu Leu Pro Gly Ser Val	
410	415	420
Lys Pro Ala Glu Tyr Asp Gln Glu Gly	Ser Tyr Pro Tyr Phe Ile	
425	430	435
Gly Val Ser Leu Gly Ser Ile Ile Val	Ile Val Phe Phe Val Ile	
440	445	450
Phe Ile Lys His Leu Ile His Ser Gln	Ile Pro Ala Leu Gln Asp	
455	460	465
Met His Ala Glu Ile Ala Gln Pro Leu	Leu Gln Ala	
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 <211> 1337  
 <212> DNA  
 <213> Homo sapiens

<400> 286  
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 agggagggtga agaaaccaag acgcagagag gccaaagcccc ttgccttggtg 150  
 tcacacagcc aaaggaggca gagccagaac tcacaaccag atccagaggc 200  
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 ggtggctccc gctgagagga tgagcaagtt cttagggcac ttcacggctg 300  
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Ile Leu Asp Leu Lys Ile Ile Gln Pro Asp Lys Asn Asn Tyr Ala  
125 130 135

Ala Met Val Phe His Tyr Met Ser Ile Thr Ile Leu Val Phe Phe  
140 145 150

Met Met Glu Ile Ile Phe Lys Leu Phe Val Phe Arg Leu Ser Ser  
155 160 165

Phe Thr Thr Ser Leu Arg Ser Trp Met Pro Val Val Val Val Val  
170 175 180

Ser Phe Ile Leu Asp Ile Val Leu Leu Phe Gln Glu His Gln Phe  
185 190 195

Glu Ala Leu Gly Leu Leu Ile Leu Leu Arg Leu Trp Arg Val Ala  
200 205 210

Arg Ile Ile Asn Gly Ile Ile Ile Ser Val Lys Thr Arg Ser Glu  
215 220 225

Arg Gln Leu Leu Arg Leu Lys Gln Met Asn Val Gln Leu Ala Ala  
230 235 240

Lys Ile Gln His Leu Glu Phe Ser Cys Ser Glu Lys Pro Leu Asp  
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<210> 288  
<211> 3334  
<212> DNA  
<213> Homo sapiens

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aagtccattt tcaagctcag tgtcttcac cctccagg aattctccac 200  
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tatctgaaca gcaggcagaa aaaattctca agagcatgga taaaaacggc 450  
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 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 3334

<210> 289

<211> 469

<212> PRT

<213> Homo sapiens

<400> 289

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Thr	Glu	Phe	Gln	Tyr	Phe	Glu	Ser	Lys	Gly	Leu	Pro	Ala	Glu	Leu	30
			20						25						
Lys	Ser	Ile	Phe	Lys	Leu	Ser	Val	Phe	Ile	Pro	Ser	Gln	Glu	Phe	45
			35						40						
Ser	Thr	Tyr	Arg	Gln	Trp	Lys	Gln	Lys	Ile	Val	Gln	Ala	Gly	Asp	60
			50						55						
Lys	Asp	Leu	Asp	Gly	Gln	Leu	Asp	Phe	Glu	Glu	Phe	Val	His	Tyr	75
			65						70						
Leu	Gln	Asp	His	Glu	Lys	Lys	Leu	Arg	Leu	Val	Phe	Lys	Ile	Leu	90
			80						85						

Asp	Lys	Lys	Asn	Asp	Gly	Arg	Ile	Asp	Ala	Gln	Glu	Ile	Met	Gln	95	100	105
Ser	Leu	Arg	Asp	Leu	Gly	Val	Lys	Ile	Ser	Glu	Gln	Gln	Ala	Glu	110	115	120
Lys	Ile	Leu	Lys	Ser	Met	Asp	Lys	Asn	Gly	Thr	Met	Thr	Ile	Asp	125	130	135
Trp	Asn	Glu	Trp	Arg	Asp	Tyr	His	Leu	Leu	His	Pro	Val	Glu	Asn	140	145	150
Ile	Pro	Glu	Ile	Ile	Leu	Tyr	Trp	Lys	His	Ser	Thr	Ile	Phe	Asp	155	160	165
Val	Gly	Glu	Asn	Leu	Thr	Val	Pro	Asp	Glu	Phe	Thr	Val	Glu	Glu	170	175	180
Arg	Gln	Thr	Gly	Met	Trp	Trp	Arg	His	Leu	Val	Ala	Gly	Gly	Gly	185	190	195
Ala	Gly	Ala	Val	Ser	Arg	Thr	Cys	Thr	Ala	Pro	Leu	Asp	Arg	Leu	200	205	210
Lys	Val	Leu	Met	Gln	Val	His	Ala	Ser	Arg	Ser	Asn	Asn	Met	Gly	215	220	225
Ile	Val	Gly	Gly	Phe	Thr	Gln	Met	Ile	Arg	Glu	Gly	Gly	Ala	Arg	230	235	240
Ser	Leu	Trp	Arg	Gly	Asn	Gly	Ile	Asn	Val	Leu	Lys	Ile	Ala	Pro	245	250	255
Glu	Ser	Ala	Ile	Lys	Phe	Met	Ala	Tyr	Glu	Gln	Ile	Lys	Arg	Leu	260	265	270
Val	Gly	Ser	Asp	Gln	Glu	Thr	Leu	Arg	Ile	His	Glu	Arg	Leu	Val	275	280	285
Ala	Gly	Ser	Leu	Ala	Gly	Ala	Ile	Ala	Gln	Ser	Ser	Ile	Tyr	Pro	290	295	300
Met	Glu	Val	Leu	Lys	Thr	Arg	Met	Ala	Leu	Arg	Lys	Thr	Gly	Gln	305	310	315
Tyr	Ser	Gly	Met	Leu	Asp	Cys	Ala	Arg	Arg	Ile	Leu	Ala	Arg	Glu	320	325	330
Gly	Val	Ala	Ala	Phe	Tyr	Lys	Gly	Tyr	Val	Pro	Asn	Met	Leu	Gly	335	340	345
Ile	Ile	Pro	Tyr	Ala	Gly	Ile	Asp	Leu	Ala	Val	Tyr	Glu	Thr	Leu	350	355	360
Lys	Asn	Ala	Trp	Leu	Gln	His	Tyr	Ala	Val	Asn	Ser	Ala	Asp	Pro	365	370	375
Gly	Val	Phe	Val	Leu	Leu	Ala	Cys	Gly	Thr	Met	Ser	Ser	Thr	Cys	380	385	390
Gly	Gln	Leu	Ala	Ser	Tyr	Pro	Leu	Ala	Leu	Val	Arg	Thr	Arg	Met	395	400	405

Gln Ala Gln Ala Ser Ile Glu Gly Ala Pro Glu Val Thr Met Ser  
 410 415  
 Ser Leu Phe Lys His Ile Leu Arg Thr Glu Gly Ala Phe Gly Leu  
 425 430 435  
 Tyr Arg Gly Leu Ala Pro Asn Phe Met Lys Val Ile Pro Ala Val  
 440 445 450  
 Ser Ile Ser Tyr Val Val Tyr Glu Asn Leu Lys Ile Thr Leu Gly  
 455 460 465  
 Val Gln Ser Arg

<210> 290  
 <211> 1658  
 <212> DNA  
 <213> Homo sapiens

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 atttcaggga gacactccat cacagtcact actgtcgctc cagctgggaa 200  
 cattggggag gatggaatcc tgagctgcac ttttgaacct gacatcaaac 250  
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 cagagggccg acagcagtgt ttgctgatca agtgatagtt ggcaatgcct 400  
 ctttcgggct gaaaaacgtg caactcacag atgctggcac ctacaaatgt 450  
 tatatcatca ctcttaaagg caaggggaat gctaacccttg agtataaaa 500  
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 aaaaaaaa 1658

<210> 291  
 <211> 282  
 <212> PRT  
 <213> Homo sapiens

<400> 291  
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 Ile Ser Gly Arg His Ser Ile Thr Val Thr Thr Val Ala Ser Ala  
 35 40 45  
 Gly Asn Ile Gly Glu Asp Gly Ile Leu Ser Cys Thr Phe Glu Pro  
 50 55 60  
 Asp Ile Lys Leu Ser Asp Ile Val Ile Gln Trp Leu Lys Glu Gly  
 65 70 75  
 Val Leu Gly Leu Val His Glu Phe Lys Glu Gly Lys Asp Glu Leu  
 80 85 90  
 Ser Glu Gln Asp Glu Met Phe Arg Gly Thr Ala Val Phe Ala  
 95 100 105  
 Asp Gln Val Ile Val Gly Asn Ala Ser Leu Arg Leu Lys Asn Val  
 110 115 120  
 Gln Leu Thr Asp Ala Gly Thr Tyr Lys Cys Tyr Ile Ile Thr Ser  
 125 130 135  
 Lys Gly Lys Gly Asn Ala Asn Leu Glu Tyr Lys Thr Gly Ala Phe  
 140 145 150  
 Ser Met Pro Glu Val Asn Val Asp Tyr Asn Ala Ser Ser Glu Thr



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Leu Arg Cys Glu	Ala Pro Arg Trp Phe	Pro Gln Pro Thr Val	Val		
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Trp Ala Ser Gln Val	Asp Gln Gly Ala	Asn Phe Ser Glu Val	Ser		
	185		190		195
Asn Thr Ser Phe Glu	Leu Asn Ser Glu	Asn Val Thr Met Lys	Val		
	200		205		210
Val Ser Val Leu Tyr	Asn Val Thr Ile	Asn Asn Thr Tyr Ser	Cys		
	215		220		225
Met Ile Glu Asn Asp	Ile Ala Lys Ala	Thr Gly Asp Ile Lys	Val		
	230		235		240
Thr Glu Ser Glu Ile	Lys Arg Arg Ser	His Leu Gln Leu Leu	Asn		
	245		250		255
Ser Lys Ala Ser Leu	Cys Val Ser Ser	Phe Phe Ala Ile Ser	Trp		
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Ala Leu Leu Pro Leu	Ser Pro Tyr Leu	Met Leu Lys			
	275		280		

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 <211> 1484  
 <212> DNA  
 <213> Homo sapiens

<400> 292  
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<210> 293  
 <211> 180  
 <212> PRT  
 <213> Homo sapiens

<400> 293  
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 Gly Leu Gln Arg Val His Glu Pro Thr Trp Ala Gln Gln Leu Leu  
 35 40 45  
 Gln Glu Met Lys Thr Leu Phe Leu Asn Thr Glu Tyr Leu Met Pro  
 50 55 60  
 Phe Leu Leu Asn Gln Cys Gly Ser Leu Leu Tyr Tyr Leu Thr Leu  
 65 70 75  
 Ala Ser Thr Asp Leu Thr Leu Ala Val Pro Ile Cys Asn Ser Leu  
 80 85 90  
 Ala Ile Ile Phe Thr Leu Ile Val Gly Lys Ala Leu Gly Glu Asp  
 95 100 105  
 Ile Gly Gly Lys Arg Lys Leu Asp Tyr Cys Glu Cys Gly Thr Gln  
 110 115 120  
 Leu Cys Gly Ser Arg His Thr Cys Val Ser Ser Phe Pro Glu Pro  
 125 130 135  
 Ile Ser Pro Glu Trp Val Arg Thr Arg Pro Phe Pro Ile Leu Pro  
 140 145 150

Phe Pro Leu Gln Leu Phe Cys Phe Leu Val Ala Ile Arg Val Pro  
155 160

Phe Pro Trp Thr Val Trp Arg Lys Thr Glu Ala Gly Val Trp Asp  
170 175 180

<210> 294  
<211> 1164  
<212> DNA  
<213> Homo sapiens

<400> 294  
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ctagagacac cagtcagatt ataccagaat atgttctgct cagcggagaa 450  
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cctggaaatg ctatgaagaa gaacagtgtg tctttctagt tgcagaactt 700  
aagaatgaca ttgagtctaa gagtctcgtg ctgaaaggct gttccaacgt 750  
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aaaaaaaaaa aaaa 1164

<210> 295  
<211> 237  
<212> PRT

<213> Homo sapiens

<400> 295

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20 25 30  
Ser Cys Val Asn Ser Ile Ala Ser Glu Cys Pro Ser His Ala Asn  
35 40 45  
Thr Ser Cys Ile Ser Ser Ser Ala Ser Ser Ser Leu Glu Thr Pro  
50 55 60  
Val Arg Leu Tyr Gln Asn Met Phe Cys Ser Ala Glu Asn Cys Ser  
65 70 75  
Glu Glu Thr His Ile Thr Ala Phe Thr Val His Val Ser Ala Glu  
80 85 90  
Glu His Phe His Phe Val Ser Gln Cys Cys Gln Gly Lys Glu Cys  
95 100 105  
Ser Asn Thr Ser Asp Ala Leu Asp Pro Pro Leu Lys Asn Val Ser  
110 115 120  
Ser Asn Ala Glu Cys Pro Ala Cys Tyr Glu Ser Asn Gly Thr Ser  
125 130 135  
Cys Arg Gly Lys Pro Trp Lys Cys Tyr Glu Glu Glu Gln Cys Val  
140 145 150  
Phe Leu Val Ala Glu Leu Lys Asn Asp Ile Glu Ser Lys Ser Leu  
155 160 165  
Val Leu Lys Gly Cys Ser Asn Val Ser Asn Ala Thr Cys Gln Phe  
170 175 180  
Leu Ser Gly Glu Asn Lys Thr Leu Gly Gly Val Ile Phe Arg Lys  
185 190 195  
Phe Glu Cys Ala Asn Val Asn Ser Leu Thr Pro Thr Ser Ala Pro  
200 205 210  
Thr Thr Ser His Asn Val Gly Ser Lys Ala Ser Leu Tyr Leu Leu  
215 220 225  
Ala Leu Ala Ser Leu Leu Leu Arg Gly Leu Leu Pro  
230 235

<210> 296

<211> 1245

<212> DNA

<213> Homo sapiens

<400> 296

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accggagcac cgcccgact ggtcttcccc ggaagacaag gataatccta 300  
gaggacgaga atgatgccat ggccgacgcc gaccgcctgg ctggaccagc 350  
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<210> 297  
<211> 341  
<212> PRT  
<213> Homo sapiens

<400> 297  
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Thr Glu Met Gln Arg Val Ser Leu Arg Phe Gly Gly Pro Met Thr  
35 40 45  
Arg Ser Tyr Arg Ser Thr Ala Arg Thr Gly Leu Pro Arg Lys Thr  
50 55 60  
Arg Ile Ile Leu Glu Asp Glu Asn Asp Ala Met Ala Asp Ala Asp

65					70					75						
Arg	Leu	Ala	Gly	80	Pro	Ala	Ala	Ala	Glu	Leu	Leu	Ala	Ala	Thr	Val	90
Ser	Thr	Gly	Phe	95	Ser	Arg	Ser	Ser	Ala	Ile	Asn	Glu	Glu	Asp	Gly	105
Ser	Ser	Glu	Glu	110	Gly	Val	Val	Ile	Asn	Ala	Gly	Lys	Asp	Ser	Thr	120
Ser	Arg	Glu	Leu	125	Pro	Ser	Ala	Thr	Pro	Asn	Thr	Ala	Gly	Ser	Ser	135
Ser	Thr	Arg	Phe	140	Ile	Ala	Asn	Ser	Gln	Glu	Pro	Glu	Ile	Arg	Leu	150
Thr	Ser	Ser	Leu	155	Pro	Arg	Ser	Pro	Gly	Arg	Ser	Thr	Glu	Asp	Leu	165
Pro	Gly	Ser	Gln	170	Ala	Thr	Leu	Ser	Gln	Trp	Ser	Thr	Pro	Gly	Ser	180
Thr	Pro	Ser	Arg	185	Trp	Pro	Ser	Pro	Ser	Pro	Thr	Ala	Met	Pro	Ser	195
Pro	Glu	Asp	Leu	200	Arg	Leu	Val	Leu	Met	Pro	Trp	Gly	Pro	Trp	His	210
Cys	His	Cys	Lys	215	Ser	Gly	Thr	Met	Ser	Arg	Ser	Arg	Ser	Gly	Lys	225
Leu	His	Gly	Leu	230	Ser	Gly	Arg	Leu	Arg	Val	Gly	Ala	Leu	Ser	Gln	240
Leu	Arg	Thr	Glu	245	His	Lys	Pro	Cys	Thr	Tyr	Gln	Gln	Cys	Pro	Cys	255
Asn	Arg	Leu	Arg	260	Glu	Glu	Cys	Pro	Leu	Asp	Thr	Ser	Leu	Cys	Thr	270
Asp	Thr	Asn	Cys	275	Ala	Ser	Gln	Ser	Thr	Thr	Ser	Thr	Arg	Thr	Thr	285
Thr	Thr	Pro	Phe	290	Pro	Thr	Ile	His	Leu	Arg	Ser	Ser	Pro	Ser	Leu	300
Pro	Pro	Ala	Ser	305	Pro	Cys	Pro	Ala	Leu	Ala	Phe	Trp	Lys	Arg	Val	315
Arg	Ile	Gly	Leu	320	Glu	Asp	Ile	Trp	Asn	Ser	Leu	Ser	Ser	Val	Phe	330
Thr	Glu	Met	Gln	335	Pro	Ile	Asp	Arg	Asn	Gln	Arg					340

<210> 298  
 <211> 2692  
 <212> DNA  
 <213> Homo sapiens

<400> 298  
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<210> 299

<211> 320

<212> PRT

<213> Homo sapiens

<400> 299

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			20					25					30	
Asp	Cys	Val	Leu	Gln	Cys	Glu	Glu	Gln	Asn	Cys	Ser	Gly	Gly	Ala
			35					40					45	
Leu	Asn	His	Phe	Arg	Ser	Arg	Gln	Pro	Ile	Tyr	Met	Ser	Leu	Ala
			50					55					60	
Gly	Trp	Thr	Cys	Arg	Asp	Asp	Cys	Lys	Tyr	Glu	Cys	Met	Trp	Val
			65					70					75	



Thr Val Gly Leu Tyr Leu Gln Glu Gly His Lys Val Pro Gln Phe  
 80 85 90  
 His Gly Lys Trp Pro Phe Ser Arg Phe Leu Phe Phe Gln Glu Pro  
 95 100 105  
 Ala Ser Ala Val Ala Ser Phe Leu Asn Gly Leu Ala Ser Leu Val  
 110 115 120  
 Met Leu Cys Arg Tyr Arg Thr Phe Val Pro Ala Ser Ser Pro Met  
 125 130 135  
 Tyr His Thr Cys Val Ala Phe Ala Trp Val Ser Leu Asn Ala Trp  
 140 145 150  
 Phe Trp Ser Thr Val Phe His Thr Arg Asp Thr Asp Leu Thr Glu  
 155 160 165  
 Lys Met Asp Tyr Phe Cys Ala Ser Thr Val Ile Leu His Ser Ile  
 170 175 180  
 Tyr Leu Cys Cys Val Arg Thr Val Gly Leu Gln His Pro Ala Val  
 185 190 195  
 Val Ser Ala Phe Arg Ala Leu Leu Leu Leu Met Leu Thr Val His  
 200 205 210  
 Val Ser Tyr Leu Ser Leu Ile Arg Phe Asp Tyr Gly Tyr Asn Leu  
 215 220 225  
 Val Ala Asn Val Ala Ile Gly Leu Val Asn Val Val Trp Trp Leu  
 230 235 240  
 Ala Trp Cys Leu Trp Asn Gln Arg Arg Leu Pro His Val Arg Lys  
 245 250 255  
 Cys Val Val Val Val Leu Leu Leu Gln Gly Leu Ser Leu Leu Glu  
 260 265 270  
 Leu Leu Asp Phe Pro Pro Leu Phe Trp Val Leu Asp Ala His Ala  
 275 280 285  
 Ile Trp His Ile Ser Thr Ile Pro Val His Val Leu Phe Phe Ser  
 290 295 300  
 Phe Leu Glu Asp Asp Ser Leu Tyr Leu Leu Lys Glu Ser Glu Asp  
 305 310 315  
 Lys Phe Lys Leu Asp  
 320

<210> 300  
 <211> 1674  
 <212> DNA  
 <213> Homo sapiens

<400> 300  
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<210> 301

<211> 461  
 <212> PRT  
 <213> Homo sapiens

<400> 301

Met	Ala	Pro	Gln	Ser	Leu	Pro	Ser	Ser	Arg	Met	Ala	Pro	Leu	Gly	1	5	10	15
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Ser	His	Gln	Asn	Leu	Lys	Glu	Phe	Ala	Leu	Thr	Asn	Pro	Glu	Lys	35	40	45	
Ser	Ser	Thr	Lys	Glu	Thr	Glu	Arg	Lys	Glu	Thr	Lys	Ala	Glu	Glu	50	55	60	
Glu	Leu	Asp	Ala	Glu	Val	Leu	Glu	Val	Phe	His	Pro	Thr	His	Glu	65	70	75	
Trp	Gln	Ala	Leu	Gln	Pro	Gly	Gln	Ala	Val	Pro	Ala	Gly	Ser	His	80	85	90	
Val	Arg	Leu	Asn	Leu	Gln	Thr	Gly	Glu	Arg	Glu	Ala	Lys	Leu	Gln	95	100	105	
Tyr	Glu	Asp	Lys	Phe	Arg	Asn	Asn	Leu	Lys	Gly	Lys	Arg	Leu	Asp	110	115	120	
Ile	Asn	Thr	Asn	Thr	Tyr	Thr	Ser	Gln	Asp	Leu	Lys	Ser	Ala	Leu	125	130	135	
Ala	Lys	Phe	Lys	Glu	Gly	Ala	Glu	Met	Glu	Ser	Ser	Lys	Glu	Asp	140	145	150	
Lys	Ala	Arg	Gln	Ala	Glu	Val	Lys	Arg	Leu	Phe	Arg	Pro	Ile	Glu	155	160	165	
Glu	Leu	Lys	Lys	Asp	Phe	Asp	Glu	Leu	Asn	Val	Val	Ile	Glu	Thr	170	175	180	
Asp	Met	Gln	Ile	Met	Val	Arg	Leu	Ile	Asn	Lys	Phe	Asn	Ser	Ser	185	190	195	
Ser	Ser	Ser	Leu	Glu	Glu	Lys	Ile	Ala	Ala	Leu	Phe	Asp	Leu	Glu	200	205	210	
Tyr	Tyr	Val	His	Gln	Met	Asp	Asn	Ala	Gln	Asp	Leu	Leu	Ser	Phe	215	220	225	
Gly	Gly	Leu	Gln	Val	Val	Ile	Asn	Gly	Leu	Asn	Ser	Thr	Glu	Pro	230	235	240	
Leu	Val	Lys	Glu	Tyr	Ala	Ala	Phe	Val	Leu	Gly	Ala	Ala	Phe	Ser	245	250	255	
Ser	Asn	Pro	Lys	Val	Gln	Val	Glu	Ala	Ile	Glu	Gly	Gly	Ala	Leu	260	265	270	
Gln	Lys	Leu	Leu	Val	Ile	Leu	Ala	Thr	Glu	Gln	Pro	Leu	Thr	Ala	275	280	285	
Lys	Lys	Lys	Val	Leu	Phe	Ala	Leu	Cys	Ser	Leu	Leu	Arg	His	Phe				

290	295	300
Pro Tyr Ala Gln Arg Gln Phe Leu Lys	Leu Gly Gly Leu Gln Val	
305	310	315
Leu Arg Thr Leu Val Gln Glu Lys Gly	Thr Glu Val Leu Ala Val	
320	325	330
Arg Val Val Thr Leu Leu Tyr Asp Leu	Val Thr Glu Lys Met Phe	
335	340	345
Ala Glu Glu Glu Ala Glu Leu Thr Gln	Glu Met Ser Pro Glu Lys	
350	355	360
Leu Gln Gln Tyr Arg Gln Val His Leu	Leu Pro Gly Leu Trp Glu	
365	370	375
Gln Gly Trp Cys Glu Ile Thr Ala His	Leu Leu Ala Leu Pro Glu	
380	385	390
His Asp Ala Arg Glu Lys Val Leu Gln	Thr Leu Gly Val Leu Leu	
395	400	405
Thr Thr Cys Arg Asp Arg Tyr Arg Gln	Asp Pro Gln Leu Gly Arg	
410	415	420
Thr Leu Ala Ser Leu Gln Ala Glu Tyr	Gln Val Leu Ala Ser Leu	
425	430	435
Glu Leu Gln Asp Gly Glu Asp Glu Gly	Tyr Phe Gln Glu Leu Leu	
440	445	450
Gly Ser Val Asn Ser Leu Leu Lys Glu	Leu Arg	
455	460	

<210> 302  
 <211> 2136  
 <212> DNA  
 <213> Homo sapiens

<400> 302  
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 cccccccttc cccttccccg gggtctgggg gtgacattgc accgcgcccc 100  
 tcgtggggtc gcgttgccac cccacgcgga ctccccagct ggcgcgcccc 150  
 tcccatttgc ctgtctcgtt caggccccca ccccccttcc cacctgacca 200  
 gccatggggg ctgcgggtgtt ttctggctgc actttcgtcg cgctcgggcc 250  
 ggcccttcgc tttttcttga tcaactgtgc tgggggacct cttcgcggtta 300  
 tcactctggt cgcaggggca tttttctggc tgggtctccct gctcctggcc 350  
 tctgtggtct ggttcatctt ggtccatgtg accgacgggt cagatgcccg 400  
 gctccagtac ggctccttga tttttggtgc tgctgtctct gtccttctac 450  
 aggaggtgtt ccgctttgcc tactacaagc tgcttaagaa ggcagatgaa 500  
 ggggttagcat cgctgagtga ggacggaaga tcacccatct ccatccgcca 550

gatggcctat gtttctgggc tctccttcgg tatcatcagt ggtgtcttct 600  
ctgttatcaa tattttggct gatgcacttg ggccagggtg ggttgggac 650  
catggagact caccctatta ctctcctgact tcagccttct tgacagcagc 700  
cattatcctg ctccatacct tttggggagt tgtgttcttt gatgcctgtg 750  
agaggagacg gtactgggct ttgggccttg tggttgggag tcacctactg 800  
acatcgggac tgacattcct gaaccctcctg tatgaggcca gcctgtctgc 850  
catctatgca gtactgttt ccatggggct ctgggccttc atcacagctg 900  
gagggtccct ccgaagtatt cagcgcagcc tcttgtgtaa ggactgacta 950  
cctggaactga tcgcctgaca gatccacct gcctgtccac tgcccatgac 1000  
tgagccacgc cccagcccg gtccattgcc cacattctct gtctcttct 1050  
cgtcgggtcta cccactacc tccagggttt tgccttctgc ttttctgacc 1100  
gttagtctct aagctttacc aggagcagcc tgggttcagc cagtcatgta 1150  
ctggtgggtt tgaatctgca ctatcccca ccacctggg accccttctg 1200  
tgtgtccagg actccctctg tctcagtgtc ctgctctcac cctgcccaag 1250  
actcactcc ctccctctct gcaggccgac ggcaggagga cagtccgggtg 1300  
atgggtgtatt ctgccctcgc catccacccc gaggactgag ggaacctagg 1350  
ggggaccctt gggcctgggg tgccctcctg atgtcctcgc cctgtatttc 1400  
tccatctcca gttctggaca gtgcagggtt ccaagaaaaa ggacctagtt 1450  
tagccattgc cctggagatg aaattaatgg aggcctcaagg atagatgagc 1500  
tctgagtttc tcagtactcc ctcaagactg gacattctgg tctttttctc 1550  
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ttttctttt ttgaggtggg gggaggagg aggtatatgt gaaactcttct 1650  
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aagtgcattg ttgggaactg gcattactgg aactaatggt ttaacctcc 1800  
ttaaccacca gcactccctc tctcccaag gtgaagtgga ggtgtctgtg 1850  
gtgagctggc cactccagag ctgcagtgcc actggaggag tcagactacc 1900  
atgacatcgt agggaaggag gggagatttt tttgtagttt ttaattgggg 1950  
tgtgggaggg gcggggagggt tttctataaa ctgtatcatt tctctgtgag 2000  
ggtggagtgt cccatccttt taatcaagggt gattgtgatt ttgactaata 2050  
aaaaagaatt tgtaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2100  
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa 2136

<210> 303  
 <211> 247  
 <212> PRT  
 <213> Homo sapiens

<400> 303  
 Met Gly Ala Ala Val Phe Phe Gly Cys Thr Phe Val Ala Phe Gly  
 1 5 10 15  
 Pro Ala Phe Ala Leu Phe Leu Ile Thr Val Ala Gly Asp Pro Leu  
 20 25 30  
 Arg Val Ile Ile Leu Val Ala Gly Ala Phe Phe Trp Leu Val Ser  
 35 40 45  
 Leu Leu Leu Ala Ser Val Val Trp Phe Ile Leu Val His Val Thr  
 50 55 60  
 Asp Arg Ser Asp Ala Arg Leu Gln Tyr Gly Leu Leu Ile Phe Gly  
 65 70 75  
 Ala Ala Val Ser Val Leu Leu Gln Glu Val Phe Arg Phe Ala Tyr  
 80 85 90  
 Tyr Lys Leu Leu Lys Lys Ala Asp Glu Gly Leu Ala Ser Leu Ser  
 95 100 105  
 Glu Asp Gly Arg Ser Pro Ile Ser Ile Arg Gln Met Ala Tyr Val  
 110 115 120  
 Ser Gly Leu Ser Phe Gly Ile Ile Ser Gly Val Phe Ser Val Ile  
 125 130 135  
 Asn Ile Leu Ala Asp Ala Leu Gly Pro Gly Val Val Gly Ile His  
 140 145 150  
 Gly Asp Ser Pro Tyr Tyr Phe Leu Thr Ser Ala Phe Leu Thr Ala  
 155 160 165  
 Ala Ile Ile Leu Leu His Thr Phe Trp Gly Val Val Phe Phe Asp  
 170 175 180  
 Ala Cys Glu Arg Arg Arg Tyr Trp Ala Leu Gly Leu Val Val Gly  
 185 190 195  
 Ser His Leu Leu Thr Ser Gly Leu Thr Phe Leu Asn Pro Trp Tyr  
 200 205 210  
 Glu Ala Ser Leu Leu Pro Ile Tyr Ala Val Thr Val Ser Met Gly  
 215 220 225  
 Leu Trp Ala Phe Ile Thr Ala Gly Gly Ser Leu Arg Ser Ile Gln  
 230 235 240  
 Arg Ser Leu Leu Cys Lys Asp  
 245

<210> 304  
 <211> 240  
 <212> DNA  
 <213> Homo sapiens

<220>

<221> unsure  
 <222> 108, 123, 126, 154, 198, 206, 217  
 <223> unknown base  
  
 <400> 304  
 aagctgggtt aaggaagcag aggagggtta gattcggtga gtgaggacgg 50  
 aagatcaacc catttccatt cggccagatg gcctatgttt ctggctcttc 100  
 ccttcggnat catcagtggt gtnttntctg ttatcaatat ttggctgat 150  
 gcanttgggc caggtgtggt tgggatccat ggagactcac cctattantt 200  
 cctganttca gccttntga cagcagccat tatcctgctc 240  
  
 <210> 305  
 <211> 378  
 <212> DNA  
 <213> Homo sapiens  
  
 <220>  
 <221> unsure  
 <222> 58, 94, 132, 186, 191, 220, 240, 248, 280, 311, 332  
 <223> unknown base  
  
 <400> 305  
 gaccgacgt tcagatgccc ggttccagta cggcttctg atttttggtg 50  
 ctgctgtntc tgtccttcta caggagtggt tccgctttgc ctantacaag 100  
 ctgcttaaga aggcagatga ggggttagca tngctgagt aggacggaag 150  
 atcaccatt tccatccgcc agatggccta tgttnttgg ntttcttcg 200  
 gtatcatcag tgggttttn tctgttatca atattttggn tgatgcantt 250  
 gggccagtg tggttgggat ccatggagan tcaccctatt aattcctgaa 300  
 ttcagccttt ntgacagcag ccattatcct gntccatacc ttttggggag 350  
 ttgtgttttt tgatgcctgt gagaggag 378  
  
 <210> 306  
 <211> 655  
 <212> DNA  
 <213> Homo sapiens  
  
 <220>  
 <221> unsure  
 <222> 1, 22, 129, 133, 184  
 <223> unknown base  
  
 <400> 306  
 ngttggagaa gtggcgogga onttcatttg gggtttcggt tccccccctt 50  
 tccctttccc cggggtctgg ggtgacattg caegggccccc tegtggggtc 100  
 gcgttgccac cccacgogga cccccagnt ggngcgccct tccattttgc 150  
 ctgtcctggt caggccccca ccccccttcc caontgacca gccatggggg 200  
 ctgcggtggt ttctggctgc actttctgct cgttcggccc ggccttcgct 250

cttttcttga tcaactgtggc tggggaccocg cttegcgtta tcatcctggt 300  
 cgcaggggca tttttctggc tgggtctccct gctcctggcc tctgtggtct 350  
 ggttcactctt ggcccatgtg accgaccggt cagatgcccg gctccagtac 400  
 ggctcctga tttttgggtc tgctgtctct gtccttctac aggaggtgtt 450  
 ccgctttgcc tactacaagc tgcttaagaa ggcagatgag gggtagcatc 500  
 cgtgagtga ggacggaaga tcaccatct ccatccgcc gatggcctat 550  
 gtttctgtc tctccttcgg tatcatcagt ggtgtcttct ctgttatcaa 600  
 tattttggct gatgcacttg ggccaggtgt ggttgggac catggagact 650  
 cacc 655

<210> 307  
 <211> 650  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 52, 89, 128  
 <223> unknown base

<400> 307  
 gtaaaagaaa gtggccggac cttcattggg gtttcgggtc cccctttcc 50  
 cnttccccgg ggtctggggg tgacattgca ccgcgccctt cgtggggctg 100  
 cgttgccacc ccacgggac tccccagntg gcgcgccctt cccatttgc 150  
 tgctcgtgtc agggcccccac ccccttccc acctgaccag ccatggggcg 200  
 tgcgggtgtt ttccgggtgc actttcgtcg cgttcgggcc cggccttcg 250  
 gcttttcttg atcactgtgg ctggggagcc gcttcgctt atcactcgtg 300  
 tcgcaggggg atttttctgg ctggtctccc tgctcctggc ctctgtggtc 350  
 tggttcatct tgggtccatgt gaccgaccg tcagatgcc ggctccagta 400  
 cggcctcctg atttttggtg ctgctgtctc tgtccttcta caggaggtgt 450  
 tccgctttgc ctactacaag ctgcttaaga aggcagatga ggggttagca 500  
 tcgctgagtg aggacggaag atcaccatc tccatccgcc agatggccta 550  
 tgtttctggt ctctccttcg gtatcatcag tgggtcttct tctgttatca 600  
 atattttggc tgatgcactt gggccaggtg tggttgggat ccatggagac 650

<210> 308  
 <211> 1570  
 <212> DNA  
 <213> Homo sapiens

<400> 308  
 gccccaggga gcagtggtg gttataactc agggccgggt cccagagccc 50



aggaggaggc agtggccagg aaggcacagg cctgagaagt ctgcggtga 100  
 gctgggagca aatccccac ccctacctg ggggacagg caagtgagc 150  
 ctggtgaggg tggctcagca ggcagggaag gagaggtgtc tgtgcgtcct 200  
 gcaccacat ctttctctgt ccctccttg cctgtcttg aggtcgtctg 250  
 actctatct tctgaattct atagtgcctg ggtctcagc cagtgcgat 300  
 ggtggcccg cttgtggtt cctctctacc tggggaata aggtgcagc 350  
 gccatggcta cagcaagacc ccctggatg tgggtgctct gtgctctgat 400  
 cacagcctg cttctgggg tcacagagca tgttctcgcc aacaatgat 450  
 tttctgtga ccaacctct aacaccgtg cctctgggag caaccaggac 500  
 ctgggagctg gggccgggga agcgcgccg tcgatgaca gcagcagcg 550  
 catcatcaat ggatccgact gcgatatga caccagccg tggcagggcg 600  
 cgctgttct aaggcccaac cagctctact gcggggcggt gttggtgat 650  
 ccacagtggc tgctcacggc cgcctactg aggaagaaag tttcagagt 700  
 ccgtctggc cactactccc tgtcaccagt ttatgaatct ggcagcaga 750  
 tgttccagg ggtcaaatcc atccccacc ctggctact ccacctggc 800  
 cactctaag acctcatgct catcaaatg aacagaagaa ttctccacc 850  
 taaagatgtc agaccatca acgtctctc tcattgtccc tctgctggga 900  
 caaagtgtt ggtgtotggc tgggggacaa ccaagagccc ccaagtgcac 950  
 ttccctaag tcctccagt cttgaatata agcgtgctaa gtcagaaaag 1000  
 gtgcgaggt gttaccga gacagataga tgacaccatg tctgcgcg 1050  
 gtgacaaagc aggtagagc tcctgccagg gtgattctg ggggcctgtg 1100  
 gtctgcaatg gctccctga gggactcgt tcctggggag attaccttg 1150  
 tgccggccc aacagaccg gtgtctaac gaacctctg aagttcacca 1200  
 agtggatcca ggaacacatc caggccaact cctgagtcac ccaggaactc 1250  
 agcacaccg catccccacc tgcgcaggg acagccctga cactccttc 1300  
 agacctcat tcctcccag agatgttgag aatgttcac tctccagccc 1350  
 ctgacccat gtctcctgga ctcagggtct gcttccccc cattgggctg 1400  
 accgtgtctc tctagttaa cctgggaac aatttccaaa actgtccagg 1450  
 gcgggggttg cgtctcaatc tcctggggc actttcatcc tcaagctcag 1500  
 ggcccatccc ttctctgag ctctgacca aatttagtcc cagaaataaa 1550  
 ctgagaagtg gaaaaaaaa 1570

<210> 309

<211> 293  
 <212> PRT  
 <213> Homo sapiens

<400> 309

Met	Ala	Thr	Ala	Arg	Pro	Pro	Trp	Met	Trp	Val	Leu	Cys	Ala	Leu
1				5					10					15
Ile	Thr	Ala	Leu	Leu	Leu	Gly	Val	Thr	Glu	His	Val	Leu	Ala	Asn
			20						25					30
Asn	Asp	Val	Ser	Cys	Asp	His	Pro	Ser	Asn	Thr	Val	Pro	Ser	Gly
			35						40					45
Ser	Asn	Gln	Asp	Leu	Gly	Ala	Gly	Ala	Gly	Glu	Asp	Ala	Arg	Ser
			50						55					60
Asp	Asp	Ser	Ser	Ser	Arg	Ile	Ile	Asn	Gly	Ser	Asp	Cys	Asp	Met
			65						70					75
His	Thr	Gln	Pro	Trp	Gln	Ala	Ala	Leu	Leu	Leu	Arg	Pro	Asn	Gln
			80						85					90
Leu	Tyr	Cys	Gly	Ala	Val	Leu	Val	His	Pro	Gln	Trp	Leu	Leu	Thr
			95						100					105
Ala	Ala	His	Cys	Arg	Lys	Lys	Val	Phe	Arg	Val	Arg	Leu	Gly	His
			110						115					120
Tyr	Ser	Leu	Ser	Pro	Val	Tyr	Glu	Ser	Gly	Gln	Gln	Met	Phe	Gln
			125						130					135
Gly	Val	Lys	Ser	Ile	Pro	His	Pro	Gly	Tyr	Ser	His	Pro	Gly	His
			140						145					150
Ser	Asn	Asp	Leu	Met	Leu	Ile	Lys	Leu	Asn	Arg	Arg	Ile	Arg	Pro
			155						160					165
Thr	Lys	Asp	Val	Arg	Pro	Ile	Asn	Val	Ser	Ser	His	Cys	Pro	Ser
			170						175					180
Ala	Gly	Thr	Lys	Cys	Leu	Val	Ser	Gly	Trp	Gly	Thr	Thr	Lys	Ser
			185						190					195
Pro	Gln	Val	His	Phe	Pro	Lys	Val	Leu	Gln	Cys	Leu	Asn	Ile	Ser
			200						205					210
Val	Leu	Ser	Gln	Lys	Arg	Cys	Glu	Asp	Ala	Tyr	Pro	Arg	Gln	Ile
			215						220					225
Asp	Asp	Thr	Met	Phe	Cys	Ala	Gly	Asp	Lys	Ala	Gly	Arg	Asp	Ser
			230						235					240
Cys	Gln	Gly	Asp	Ser	Gly	Gly	Pro	Val	Val	Cys	Asn	Gly	Ser	Leu
			245						250					255
Gln	Gly	Leu	Val	Ser	Trp	Gly	Asp	Tyr	Pro	Cys	Ala	Arg	Pro	Asn
			260						265					270
Arg	Pro	Gly	Val	Tyr	Thr	Asn	Leu	Cys	Lys	Phe	Thr	Lys	Trp	Ile
			275						280					285
Gln	Glu	Thr	Ile	Gln	Ala	Asn	Ser							

<210> 310  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 310  
 tcctgtgacc acccctctaa cacc 24

<210> 311  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 311  
 ctggaacatc tgctgcccag attc 24

<210> 312  
 <211> 50  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 312  
 gtcggatgac agcagcagcc gcatcatcaa tggatccgac tgcgatatgc 50

<210> 313  
 <211> 3010  
 <212> DNA  
 <213> Homo sapiens

<400> 313  
 atggtcaacg accggtggaa gaccatgggc ggcgctgccc aacttgagga 50  
 ccggccgcgc gacaagccgc agcggccgag ctgcggctac gtgctgtgca 100  
 ccgtgtctgt gcccttggt gtgctgtctg ctgtagctgt caccggtgcc 150  
 gtgtctcttc tgaaccacgc ccacgcgccc ggcacggcgc cccacctgt 200  
 cgtcagcact ggggctgccca gcgccaacag cgccctgtgc actgtggaaa 250  
 gggggagacag ctgcacacgc agcatcctca ttgacccgcg ctgccccgac 300  
 ctacacgaca gcttcgcacg cctggagagc gccacggcct cggtgtgtgca 350  
 ggcgctgaca gagcaaccag cccagccacg gctgggtgggc gaccaggaga 400  
 aggagctgct ggacacgctg gcgaccagc tgccccggct gctggcccca 450  
 gcctcagagc tgcagacgga gtgcatgggg ctgcggaagg ggcattggcac 500  
 gctggggccag ggcctcagcg ccctgcagag tagcaggggc cgcctcatcc 550

agcttctctc tgagagccag ggccacatgg ctacacctggt gaactccgtc 600  
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 caacaaggcc gaccttcaga gagcgcctcg ccggggaacc cggccccggg 700  
 gctgtgccac tggctcccgg ccccgagact gtctggacgt cctcctaagc 750  
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 cggcttcacg gtgtactgtg acatgcgcac ggacggcgcg ggctggacgg 850  
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 gcgtaccgag acggctttgg caggctcacc ggggagcact ggctaggcgt 950  
 caagaggatc cagccctga ccacacagcg tgcctacgag ctgcacgttg 1000  
 acctggagga ctttgagaat ggcacggcct atgcccgcta cgggagcttc 1050  
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 cgtggctgac tattccggca ctgcaggcga ctccctctg aagcacacgg 1150  
 gcatgaggtt caccaccaag gacctgaca gcgaccttc agagaacaac 1200  
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 caacctcaat gggcagtagc tgcgcggtgc gcacgcctcc tatgcgacg 1300  
 gcgtggagtg gtccctctgg accggctggc agtactcact caagtctctc 1350  
 gagatgaaga tccggccggc ccgggaggac cgctagactg gtgcaccttg 1400  
 tccttgggcc tgcctggtcc tgcgcgccca tcccgcaccc cactcactc 1450  
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 cattatggg acagagagca gggggcagc agcaccctg gagtcctcct 1800  
 agcagatcgt ggggaatgtc aggtctctct gaggtcaggt ctgaggccag 1850  
 tatctccag ccctcccaat gccaaacccc acccgcttc cctggtgccc 1900  
 agagaaccca cctctcccc aagggcctca gectggtgt gggctgggtg 1950  
 gcccatcct accaggccct gaggtcagga tggggagctg ctgcctttg 2000  
 ggaccacgc tccaaggctg agaccagttc cctggaggcc acccaccctg 2050  
 tgcccggca ggcctgggtg ctgcagtcct cttacctgct gtgcccaact 2100  
 gctctctgtc tcaaatgagg cccaacccat cccccaccca gctccggccc 2150

gtctctctac ctggggcagc cggggctgcc atcccatttc tctgcctct 2200  
 ggaaggtggg tggggccctg caccgtgggg ctggactgcg ctaatgggaa 2250  
 gctcttggtt ttctgggctg gggcctaggc agggctggga tgaggtctgt 2300  
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 agggaggcct tgggggtgat gaccccttcc ctgaggtggc tgtctccatg 2400  
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 ccggcccgcc gagtgtgcaa gggacaggga ccacctcacc gggcaaatgg 2500  
 ggtcgggggg actggggcac cagaccaggc accacctgga cactttcttg 2550  
 ttgaatcctc ccaacacoca gcacgtgtc atcccactc cttgtgtgca 2600  
 cacatgcaga ggtgagaccc gcagggtccc agggaccaga gccacaaggg 2650  
 cagggtctga gccgggtcct cagctgtctg ctccagagcc ctggaccgcc 2700  
 gtgcgttacg tcaggcccg atgcaggcg gcttttccaa ggccctctga 2750  
 tgggggctc cgaagggtc ggaagtcagc ttggggagct gcctagcagc 2800  
 ctctcctcgg gcaggaggg aggtggttc ctccaaagga cccccatgg 2850  
 cagggtgccta ggggtgtgg ggttccgttc tccctcccc tccactgaa 2900  
 gtttgtgctt aaaaacaat aaatttgact tggcaccact gggggttgg 2950  
 gggagaggcc gtgtgacctg gctctctgtc ccagtgcac caggatcatc 3000  
 acatgcgcag 3010

<210> 314  
 <211> 461  
 <212> PRT  
 <213> Homo sapiens

<400> 314  
 Met Val Asn Asp Arg Trp Lys Thr Met Gly Gly Ala Ala Gln Leu  
 1 5 10  
 Glu Asp Arg Pro Arg Asp Lys Pro Gln Arg Pro Ser Cys Gly Tyr  
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 Val Leu Cys Thr Val Leu Leu Ala Leu Ala Val Leu Leu Ala Val  
 35 40 45  
 Ala Val Thr Gly Ala Val Leu Phe Leu Asn His Ala His Ala Pro  
 50 55 60  
 Gly Thr Ala Pro Pro Pro Val Val Ser Thr Gly Ala Ala Ser Ala  
 65 70 75  
 Asn Ser Ala Leu Val Thr Val Glu Arg Ala Asp Ser Ser His Leu  
 80 85 90  
 Ser Ile Leu Ile Asp Pro Arg Cys Pro Asp Leu Thr Asp Ser Phe  
 95 100 105

Ala Arg Leu Glu Ser	Ala Gln Ala Ser	Val Leu Gln Ala Leu Thr
110		115 120
Glu His Gln Ala Gln Pro Arg Leu Val	Gly Asp Gln Glu Gln Glu	
125	130	135
Leu Leu Asp Thr Leu Ala Asp Gln Leu	Pro Arg Leu Leu Ala Arg	
140	145	150
Ala Ser Glu Leu Gln Thr Glu Cys Met	Gly Leu Arg Lys Gly His	
155	160	165
Gly Thr Leu Gly Gln Gly Leu Ser Ala	Leu Gln Ser Glu Gln Gly	
170	175	180
Arg Leu Ile Gln Leu Leu Ser Glu Ser	Gln Gly His Met Ala His	
185	190	195
Leu Val Asn Ser Val Ser Asp Ile Leu	Asp Ala Leu Gln Arg Asp	
200	205	210
Arg Gly Leu Gly Arg Pro Arg Asn Lys	Ala Asp Leu Gln Arg Ala	
215	220	225
Pro Ala Arg Gly Thr Arg Pro Arg Gly	Cys Ala Thr Gly Ser Arg	
230	235	240
Pro Arg Asp Cys Leu Asp Val Leu Leu	Ser Gly Gln Gln Asp Asp	
245	250	255
Gly Val Tyr Ser Val Phe Pro Thr His	Tyr Pro Ala Gly Phe Gln	
260	265	270
Val Tyr Cys Asp Met Arg Thr Asp Gly	Gly Gly Trp Thr Val Phe	
275	280	285
Gln Arg Arg Glu Asp Gly Ser Val Asn	Phe Phe Arg Gly Trp Asp	
290	295	300
Ala Tyr Arg Asp Gly Phe Gly Arg Leu	Thr Gly Glu His Trp Leu	
305	310	315
Gly Leu Lys Arg Ile His Ala Leu Thr	Thr Gln Ala Ala Tyr Glu	
320	325	330
Leu His Val Asp Leu Glu Asp Phe Glu	Asn Gly Thr Ala Tyr Ala	
335	340	345
Arg Tyr Gly Ser Phe Gly Val Gly Leu	Phe Ser Val Asp Pro Glu	
350	355	360
Glu Asp Gly Tyr Pro Leu Thr Val Ala	Asp Tyr Ser Gly Thr Ala	
365	370	375
Gly Asp Ser Leu Leu Lys His Ser Gly	Met Arg Phe Thr Thr Lys	
380	385	390
Asp Arg Asp Ser Asp His Ser Glu Asn	Asn Cys Ala Ala Phe Tyr	
395	400	405
Arg Gly Ala Trp Trp Tyr Arg Asn Cys	His Thr Ser Asn Leu Asn	
410	415	420

Gly Gln Tyr Leu Arg Gly Ala His Ala Ser Tyr Ala Asp Gly Val  
 425 430 435

Glu Trp Ser Ser Trp Thr Gly Trp Gln Tyr Ser Leu Lys Phe Ser  
 440 445 450

Glu Met Lys Ile Arg Pro Val Arg Glu Asp Arg  
 455 460

<210> 315  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 315  
 cacacgtcca acctcaatgg gcag 24

<210> 316  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 316  
 gaccagcagg gccaaaggaca agg 23

<210> 317  
 <211> 44  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 317  
 gttctctgag atgaagatcc ggccgggtccg ggagtaccgc ttag 44

<210> 318  
 <211> 1841  
 <212> DNA  
 <213> Homo sapiens

<400> 318  
 gcagtcagag acttcccctg cccctcgtg ggaagaaca ttaggaatgc 50  
 ctttttagtgc cttgcttct gaactagctc acagtagccc ggcggcccag 100  
 ggcaatccga ccacatttca ctctcaccgc tgtaggaatc cagatgcagg 150  
 ccaagtacag cagcacgagg gacatgctgg atgatgatgg ggacaccacc 200  
 atgagcctgc attctcaagc ctctgccaca actcggcacc cagagccccg 250  
 gcgcacagag cacagggtc cctcttcaac gtggcgacca gtggccctga 300  
 ccctgctgac tttgtgcttg gtgctgctga tagggctggc agccctgggg 350  
 cttttgtttt ttcagtacta ccagctctcc aatactggtc aagacaccat 400

ttctcaaatg gaagaaagat taggaaatac gtcccaagag ttgcaatctc 450  
 ttcaagtcca gaataataag ctgtcaggaa gtctgcagca tgtggctgaa 500  
 aaactctgtc gtgagctgta taacaaagct ggagcacaca ggtgcagccc 550  
 ttgtacagaa caatggaat ggcatggaga caattgctac cagtctcata 600  
 aagacagcaa aagttgggag gactgtaaat atttctgcct tagtgaaaa 650  
 tctaccatgc tgaagataaa caaacaagaa gacctggaat ttgocgcgc 700  
 tcagagctac tctgagtttt tctactctta ttggacaggg cttttgcgc 750  
 ctgacagtgg caaggcctgg ctgtggatgg atggaacccc ttctactct 800  
 gaactgttcc atattataat agatgtcacc agcccaagaa gcagagactg 850  
 tgtggccatc ctcaatggga tgatcttctc aaaggactgc aaagaattga 900  
 agcgttgtgt ctgtgagaga agggcaggaa tggagaagcc agagagcctc 950  
 catgtccccc ctgaacatt aggcgaaggt gactgattcg ccctctgcaa 1000  
 ctacaaatag cagagtgcgc caggcgggtgc caaagcaagg gctagttgag 1050  
 acattgggaa atggaacata atcaggaaag actatctctc tgactagtac 1100  
 aaaatgggtt ctctgttttc ctgttcagga taccagcat ttctgagctt 1150  
 gggtttatgc acgtatttaa cagtcacaag aagtcttatt tacatgccac 1200  
 caaccaacct cagaaaccca taatgtcatc tgccttcttg gcttagagat 1250  
 aacttttagc tctctttctt ctcaatgtct aatatacct ccctgttttc 1300  
 atgtcttctt tacacttggt ggaataagaa actttttgaa gttagggaaa 1350  
 tacattgagg taacatcctt ttctctgaca gtcaagtagt ccatcagaaa 1400  
 ttggcagtca cttccagat tgtaccagca aatacacaaag gaattctttt 1450  
 tgtttgttcc agttcatact agtcccttcc caatocatca gtaaagaccc 1500  
 catctgcctt gtccatgccg ttcccaaca gggatgtcac ttgatagag 1550  
 aatctcaaat ctcaatgcct tataagcatt ccttctgtg tccattaaga 1600  
 ctctgataat tgtctccctt ccataggaat ttctccagg aaagaaatat 1650  
 atcccatctc ccgtttcata tcagaactac cgtcccgat attcccttca 1700  
 gagagattaa agaccagaaa aaagtggacc tottcatctg cacctgtaat 1750  
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 actgaagatt taataataat aaatgtaaat actgtgaaaa a 1841

<210> 319  
 <211> 280  
 <212> PRT  
 <213> Homo sapiens



<400> 319

Met Gln Ala Lys Tyr Ser Ser Thr Arg Asp Met Leu Asp Asp Asp  
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Gly Asp Thr Thr Met Ser Leu His Ser Gln Ala Ser Ala Thr Thr  
20 25 30  
Arg His Pro Glu Pro Arg Arg Thr Glu His Arg Ala Pro Ser Ser  
35 40 45  
Thr Trp Arg Pro Val Ala Leu Thr Leu Leu Thr Leu Cys Leu Val  
50 55 60  
Leu Leu Ile Gly Leu Ala Ala Leu Gly Leu Leu Phe Phe Gln Tyr  
65 70 75  
Tyr Gln Leu Ser Asn Thr Gly Gln Asp Thr Ile Ser Gln Met Glu  
80 85 90  
Glu Arg Leu Gly Asn Thr Ser Gln Glu Leu Gln Ser Leu Gln Val  
95 100 105  
Gln Asn Ile Lys Leu Ala Gly Ser Leu Gln His Val Ala Glu Lys  
110 115 120  
Leu Cys Arg Glu Leu Tyr Asn Lys Ala Gly Ala His Arg Cys Ser  
125 130 135  
Pro Cys Thr Glu Gln Trp Lys Trp His Gly Asp Asn Cys Tyr Gln  
140 145 150  
Phe Tyr Lys Asp Ser Lys Ser Trp Glu Asp Cys Lys Tyr Phe Cys  
155 160 165  
Leu Ser Glu Asn Ser Thr Met Leu Lys Ile Asn Lys Gln Glu Asp  
170 175 180  
Leu Glu Phe Ala Ala Ser Gln Ser Tyr Ser Glu Phe Phe Tyr Ser  
185 190 195  
Tyr Trp Thr Gly Leu Leu Arg Pro Asp Ser Gly Lys Ala Trp Leu  
200 205 210  
Trp Met Asp Gly Thr Pro Phe Thr Ser Glu Leu Phe His Ile Ile  
215 220 225  
Ile Asp Val Thr Ser Pro Arg Ser Arg Asp Cys Val Ala Ile Leu  
230 235 240  
Asn Gly Met Ile Phe Ser Lys Asp Cys Lys Glu Leu Lys Arg Cys  
245 250 255  
Val Cys Glu Arg Arg Ala Gly Met Val Lys Pro Glu Ser Leu His  
260 265 270  
Val Pro Pro Glu Thr Leu Gly Glu Gly Asp  
275 280

<210> 320

<211> 468

<212> DNA

<213> Homo sapiens

<220>  
 <221> unsure  
 <222> 59, 95, 149, 331, 364, 438, 446  
 <223> unknown base

<400> 320  
 aattttacc gctgtaggaa tccagatgca ggccaagtac agcagcacga 50  
 gggacatgnt ggatgatgat gggacaccac catgagcctg cattntcaag 100  
 cttttgccac aattggcat ccagagcccc ggcgcacaga gcacagggnt 150  
 ctttttcaa cgtggcgacc agtggccctg accctgctga ctttgtgtt 200  
 ggtgctgctg atagggttg cagccctggg gcttttgitt tttcagtact 250  
 accagctctc caatactggt caagacacca tttctcaaat ggaagaaaga 300  
 ttaggaaata cgtcccaaga gttgcaattt nttcaagtcc agaataataa 350  
 gcttgacgga agntngcagc atgtggctga aaaactctgt cgtgagctgt 400  
 ataacaaagc tggaggaact ttgaaggagg gcaaagtntc ctcantact 450  
 atacacacac cacttccc 468

<210> 321  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 321  
 atgcaggcca agtacagcag cac 23

<210> 322  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 322  
 catgctgacg acttctctga agc 23

<210> 323  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 323  
 ccacacagtc tctgcttctt ggg 23

<210> 324  
 <211> 40  
 <212> DNA  
 <213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 324

atgctggatg atgatgggga caccacatg agcctgcatt 40

<210> 325

<211> 2988

<212> DNA

<213> Homo sapiens

<400> 325

gccgagcgca agaaccctgc gcagcccaga gcagctgctg gaggggaatc 50  
gaggcgcggc tccggggatt cggctcgggc cgctcgctct gctctcggg 100  
gagggagcgg gcccgccgc gggggccgag cctccggat cggcccccctc 150  
cccggtcccg cccctcgga gactcctctg gctgctctgg ggttcgccc 200  
ggggcgggga cccgcggtcc gggcgccatg cgggcacgct tgtgctgtc 250  
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ccctgagcct gctcagcgtc acctgggtgg aggagccgtg cggcccaggc 350  
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ggcgcgccgg cccaactcgg tgcagcccgg agcgagcgcg gagaagcccc 450  
ggggcgcgga agcgccggg gagaattggg agccgcgctg ctggccctac 500  
caccctgcac agcccgcca ggcggccaaa aaggccgtca ggaccgcga 550  
catcagcagc gagctgggca tcaggcagag gctgctggtg cgggtgctga 600  
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gacacctgca cctggcgctg cgcacactgc tggagcagca cggcgacgac 800  
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tactgccacg gaggttttg ggtgctgctg tcgcgcatgc tgtgcaaca 1000  
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accctgtgcg tgaccctgtg cacatgtacc agctgcacaa agctttcgcc 1250  
cgagctgaac tggaacgcac gtaccaggag atccaggagt tacagtggga 1300

gatccagaat accagccatc tggccgttga tggggaccgg gcagctgctt 1350  
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 cggctccaga agcagcagct ggtgaatggc taccgacgct ttgatccggc 1600  
 ccgggggatg gaatacacgc tggacttgca gctggaggca ctgaccccc 1650  
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 agccgctgg agatcttgcc tgtccctat gtcactgagg cctcacgtct 1750  
 cactgtgctg ctgcctctag ctgcggctga cgtgacctg gccctggct 1800  
 tcttgagggc ctttgccact gcagcactgg agcctggtga tgtgcggca 1850  
 gccctgacct tgctgctact gtatgagccg cggcaggccc agcgcgtggc 1900  
 ccattcgagat gtcttcgcac ctgtcaaggc ccacgtggca gagctggagc 1950  
 ggcgtttccc cggtgcccg gtgccatggc tcagtgtgca gacagccgca 2000  
 ccctaccac tgcgcctcat ggatctact tccaagaagc acccgctgga 2050  
 cacactgttc ctgctggccg ggccagacac ggtgctcacg cctgacttcc 2100  
 tgaacgctg ccgcatgcat gccatctccg gctggcaggc cttctttccc 2150  
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 gaggacctgt accaccgctg cctccagagc gtgcttgagg gcctcggtc 2500  
 ccgaaccag ctggccatgc tactctttga acaggagcag ggcaacagca 2550  
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gagctgagga gggggcatct cccaaacttct cccttttgga cccctgccaa 2950  
 gctccctgcc ttttaataaac tggccaagtg tggaaaaa 2988

<210> 326  
 <211> 775  
 <212> PRT  
 <213> Homo sapiens

<400> 326  
 Met Arg Ala Ser Leu Leu Leu Ser Val Leu Arg Pro Ala Gly Pro  
 1 5 10 15  
 Val Ala Val Gly Ile Ser Leu Gly Phe Thr Leu Ser Leu Leu Ser  
 20 25 30  
 Val Thr Trp Val Glu Glu Pro Cys Gly Pro Gly Pro Pro Gln Pro  
 35 40 45  
 Gly Asp Ser Glu Leu Pro Pro Arg Gly Asn Thr Asn Ala Ala Arg  
 50 55 60  
 Arg Pro Asn Ser Val Gln Pro Gly Ala Glu Arg Glu Lys Pro Gly  
 65 70 75  
 Ala Gly Glu Gly Ala Gly Glu Asn Trp Glu Pro Arg Val Leu Pro  
 80 85 90  
 Tyr His Pro Ala Gln Pro Gly Gln Ala Ala Lys Lys Ala Val Arg  
 95 100 105  
 Thr Arg Tyr Ile Ser Thr Glu Leu Gly Ile Arg Gln Arg Leu Leu  
 110 115 120  
 Val Ala Val Leu Thr Ser Gln Thr Thr Leu Pro Thr Leu Gly Val  
 125 130 135  
 Ala Val Asn Arg Thr Leu Gly His Arg Leu Glu Arg Val Val Phe  
 140 145 150  
 Leu Thr Gly Ala Arg Gly Arg Arg Ala Pro Gly Met Ala Val  
 155 160 165  
 Val Thr Leu Gly Glu Glu Arg Pro Ile Gly His Leu His Leu Ala  
 170 175 180  
 Leu Arg His Leu Leu Glu Gln His Gly Asp Asp Phe Asp Trp Phe  
 185 190 195  
 Phe Leu Val Pro Asp Thr Thr Tyr Thr Glu Ala His Gly Leu Ala  
 200 205 210  
 Arg Leu Thr Gly His Leu Ser Leu Ala Ser Ala Ala His Leu Tyr  
 215 220 225  
 Leu Gly Arg Pro Gln Asp Phe Ile Gly Gly Glu Pro Thr Pro Gly  
 230 235 240  
 Arg Tyr Cys His Gly Gly Phe Gly Val Leu Leu Ser Arg Met Leu  
 245 250 255  
 Leu Gln Gln Leu Arg Pro His Leu Glu Gly Cys Arg Asn Asp Ile  
 260 265 270

Val Ser Ala Arg	Pro Asp Glu Trp Leu	Gly Arg Cys Ile Leu	Asp
	275	280	285
Ala Thr Gly Val	Gly Cys Thr Gly Asp	His Glu Gly Val His	Tyr
	290	295	300
Ser His Leu Glu	Leu Ser Pro Gly Glu	Pro Val Gln Glu Gly	Asp
	305	310	315
Pro His Phe Arg	Ser Ala Leu Thr Ala	His Pro Val Arg Asp	Pro
	320	325	330
Val His Met Tyr	Gln Leu His Lys Ala	Phe Ala Arg Ala Glu	Leu
	335	340	345
Glu Arg Thr Tyr	Gln Glu Ile Gln Glu	Leu Gln Trp Glu Ile	Gln
	350	355	360
Asn Thr Ser His	Leu Ala Val Asp Gly	Asp Arg Ala Ala Ala	Trp
	365	370	375
Pro Val Gly Ile	Pro Ala Pro Ser Arg	Pro Ala Ser Arg Phe	Glu
	380	385	390
Val Leu Arg Trp	Asp Tyr Phe Thr Glu	Gln His Ala Phe Ser	Cys
	395	400	405
Ala Asp Gly Ser	Pro Arg Cys Pro Leu	Arg Gly Ala Asp Arg	Ala
	410	415	420
Asp Val Ala Asp	Val Leu Gly Thr Ala	Leu Glu Glu Leu Asn	Arg
	425	430	435
Arg Tyr His Pro	Ala Leu Arg Leu Gln	Lys Gln Gln Leu Val	Asn
	440	445	450
Gly Tyr Arg Arg	Phe Asp Pro Ala Arg	Gly Met Glu Tyr Thr	Leu
	455	460	465
Asp Leu Gln Leu	Glu Ala Leu Thr Pro	Gln Gly Gly Arg Arg	Pro
	470	475	480
Leu Thr Arg Arg	Val Gln Leu Leu Arg	Pro Leu Ser Arg Val	Glu
	485	490	495
Ile Leu Pro Val	Pro Tyr Val Thr Glu	Ala Ser Arg Leu Thr	Val
	500	505	510
Leu Leu Pro Leu	Ala Ala Ala Glu Arg	Asp Leu Ala Pro Gly	Phe
	515	520	525
Leu Glu Ala Phe	Ala Thr Ala Ala Leu	Glu Pro Gly Asp Ala	Ala
	530	535	540
Ala Ala Leu Thr	Leu Leu Leu Leu Tyr	Glu Pro Arg Gln Ala	Gln
	545	550	555
Arg Val Ala His	Ala Asp Val Phe Ala	Pro Val Lys Ala His	Val
	560	565	570
Ala Glu Leu Glu	Arg Arg Phe Pro Gly	Ala Arg Val Pro Trp	Leu
	575	580	585

Ser Val Gln Thr	Ala Ala Pro Ser Pro	Leu Arg Leu Met Asp	Leu
590		595	600
Leu Ser Lys Lys	His Pro Leu Asp Thr	Leu Phe Leu Leu Ala	Gly
605		610	615
Pro Asp Thr Val	Leu Thr Pro Asp Phe	Leu Asn Arg Cys Arg	Met
620		625	630
His Ala Ile Ser	Gly Trp Gln Ala Phe	Phe Pro Met His Phe	Gln
635		640	645
Ala Phe His Pro	Gly Val Ala Pro Pro	Gln Gly Pro Gly Pro	Pro
650		655	660
Glu Leu Gly Arg	Asp Thr Gly Arg Phe	Asp Arg Gln Ala Ala	Ser
665		670	675
Glu Ala Cys Phe	Tyr Asn Ser Asp Tyr	Val Ala Ala Arg Gly	Arg
680		685	690
Leu Ala Ala Ala	Ser Glu Gln Glu Glu	Glu Leu Leu Glu Ser	Leu
695		700	705
Asp Val Tyr Glu	Leu Phe Leu His Phe	Ser Ser Leu His Val	Leu
710		715	720
Arg Ala Val Glu	Pro Ala Leu Leu Gln	Arg Tyr Arg Ala Gln	Thr
725		730	735
Cys Ser Ala Arg	Leu Ser Glu Asp Leu	Tyr His Arg Cys Leu	Gln
740		745	750
Ser Val Leu Glu	Gly Leu Gly Ser Arg	Thr Gln Leu Ala Met	Leu
755		760	765
Leu Phe Glu Gln	Glu Gln Gly Asn Ser	Thr	
770		775	

<210> 327

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 327

tggaaggctg ccgcaacgac aatc 24

<210> 328

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 328

ctgatgtggc cgatgttctg 20

<210> 329

<211> 20

<212> DNA  
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 <220>  
 <223> Synthetic oligonucleotide probe  
  
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 <210> 331  
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 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 331  
 atgcatggga aagaaggcct gccc 24  
  
 <210> 332  
 <211> 47  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 332  
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 <210> 333  
 <211> 1095  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 333  
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 gctccccctag tggagaaaag gagtagctat tagccaattc ggcaggggccc 150  
 gcttttttaga agcttgattt cctttgaaga tgaagacta gcggaagctc 200  
 tgctcttttc ccagctgggc gagggaaactc ggggcgattg gctgggaact 250  
 gtatccacc ccaatgtcacc gattttcttc tatgcaggaa atgagcagac 300  
 ccatcaataa gaaatttctc agcctggccg aaatgggtt gccccacgaa 350  
 gccacgacaa ctggaggcaa agagggttgc tcaacgcccc gcctcattgg 400



aaaaccaa at cagatctggg acctatatag cgtggcggag gcggggcgat 450  
 gattgtcgcg ctgcaccca ctgcagctgc gcacagtcgc atttctttcc 500  
 ccgccctga gacctgcag caccatctgt catggcggtt gggctgtttg 550  
 gtttgagcgc tcgcgtcttt ttggcggcag cggcgacgcg agggctcccc 600  
 gcgcgccgct tccgtggga atctagcttc tccaggaactg ttgtcgcccc 650  
 gtccgctgtg gcgggaaagc ggccccaga accgaccaca ccgtggcaag 700  
 aggaccacaga acccgaggac gaaaacttgt atgagaagaa cccagactcc 750  
 catggttatg acaaggacc cgttttgac gtctggaaca tgcgacttgt 800  
 cttctctctt ggcgctctca tcatcctggt ccttggcagc acctttgttg 850  
 cctatctgcc tgactacagg atgaaagagt ggtcccgccg cgaagctgag 900  
 aggccttgta aataccgaga ggccaatggc cttcccatca tggaatccaa 950  
 ctgcttcgac cccagcaaga tccagctgcc agaggatgag tgaccagtgt 1000  
 ctaagtgggg ctcaagaagc accgccttcc ccacccctcg cctgccattc 1050  
 tgacctcttc tcagagcacc taattaaagc ggctgaaagt ctgaa 1095

<210> 334  
 <211> 153  
 <212> PRT  
 <213> Homo sapiens

<400> 334  
 Met Ala Ala Gly Leu Phe Gly Leu Ser Ala Arg Arg Leu Leu Ala  
 1 5 10 15  
 Ala Ala Ala Thr Arg Gly Leu Pro Ala Ala Arg Val Arg Trp Glu  
 20 25 30  
 Ser Ser Phe Ser Arg Thr Val Val Ala Pro Ser Ala Val Ala Gly  
 35 40 45  
 Lys Arg Pro Pro Glu Pro Thr Thr Pro Trp Gln Glu Asp Pro Glu  
 50 55 60  
 Pro Glu Asp Glu Asn Leu Tyr Glu Lys Asn Pro Asp Ser His Gly  
 65 70 75  
 Tyr Asp Lys Asp Pro Val Leu Asp Val Trp Asn Met Arg Leu Val  
 80 85 90  
 Phe Phe Phe Gly Val Ser Ile Ile Leu Val Leu Gly Ser Thr Phe  
 95 100 105  
 Val Ala Tyr Leu Pro Asp Tyr Arg Met Lys Glu Trp Ser Arg Arg  
 110 115 120  
 Glu Ala Glu Arg Leu Val Lys Tyr Arg Glu Ala Asn Gly Leu Pro  
 125 130 135  
 Ile Met Glu Ser Asn Cys Phe Asp Pro Ser Lys Ile Gln Leu Pro  
 140 145 150

Glu Asp Glu

<210> 335  
<211> 442  
<212> DNA  
<213> Homo sapiens

<400> 335  
ggcgggtggg ctgttttggt tgagcgctcg cgtcttttg gcggcagcgg 50  
cgacgcgagg gtcctccggcc gcccgcgctcc gctgggaatc tagcttctcc 100  
aggactgtgg tcgccccgctc cgctgtggcg ggaagcggc cccagaacc 150  
gaccacaccg tggcaagagg acccagaacc cgaggacgaa aacttgatg 200  
agaagaacc agactcccat ggttatgaca aggaccccg tttggacgtc 250  
tggaacatgc gacttgctt cttctttggc gtctccatca tcctggtcct 300  
tggcagcacc tttgtggcct atctgcctga ctacaggatg aaagagtgg 350  
cccgccgga agctgagagg ctgtgaaat accgagaggc caatggcctt 400  
cccatcatgg aatccaactg cttcgacccc agcaagatcc ag 442

<210> 336  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 336  
ctgagaccct gcagcacat ctg 23

<210> 337  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 337  
gggtcttctt gagccccact tagc 24

<210> 338  
<211> 40  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 338  
aatctagctt ctccaggact gtggtcgccc cgtccgctgt 40

<210> 339  
<211> 2162  
<212> DNA

<213> Homo sapiens

<400> 339

gcggcggtcta tgcgcgttgc tctgctcgtc ctgttgctcc tggggcccg 50  
cggctggtgc ctgcagaac cccacgcga cagcctgcgg gaggaacttg 100  
tcacacccc gctgccttcc ggggacgtag ccgcccatt ccagttccgc 150  
acgcgctggg attcggagct tcagcgggaa ggagtgtccc attacagct 200  
ctttccaaa gccctggggc agctgatctc caagtattct ctacgggagc 250  
tgcacctgtc attcacaaa ggcttttgga ggaccgata ctgggggcca 300  
cccttctctc agggcccatc aggtgcagag ctgtgggtct ggttccaaga 350  
cactgtcact gatgtggata aatcttgaa ggagctcagt aatgtcctct 400  
cagggatctt ctgcgcctct ctcaacttca tcgactccac caacacagtc 450  
actccactg cctccttcaa acccctgggt ctggccaatg acactgacca 500  
ctactttctg cgtatgctg tgtgcgcgcg ggaggtggtc tgcaccgaaa 550  
acctcacccc ctggaagaag ctcttgccct gtagttccaa ggcaggcctc 600  
tgtgtgctgc tgaaggcaga tcgcttgctc cacaccagct accactccca 650  
ggcagtgcac atccgccctg tttgcagaaa tgcacgctgt actagcatct 700  
cctgggagct gaggcagacc ctgtcagttg tatttgatgc ctcatcacg 750  
gggcagggaa agaaagactg gtccctcttc cggagtgttc ccgaacctc 800  
cacggagccc tgccccctg ctacagagag ccgagtctat gtggacatca 850  
ccacctacaa ccaggacaac gagacattag aggtgcacc accccgacc 900  
actacatctc aggcgtcat cctaggcact cggaagacct atgccatcta 950  
tgacttgctt gacaccgcca tgatcaacaa ctctcgaac ctcaacatcc 1000  
agctcaagtg gaagagacc ccagagaatg agggccccc agtgcccttc 1050  
ctgcatgcc agcgttacgt gagtggctat gggctgcaga agggggagct 1100  
gagcacactg ctgtacaaca cccaccata ccgggccttc cgggtgctgc 1150  
tgctggacac cgtaccctgg tatctgcgc tgtagtgca caccctcacc 1200  
atcacctcca agggcaagga gaacaaacca agttacatcc actaccagcc 1250  
tgcccaggac cggctgcaac cccacctct ggagatgctg attcagctgc 1300  
cgccaactc agtcaccaag gtttccatcc agtttgagcg ggcgtgctg 1350  
aagtggaccg agtacagcc agatcctaac catggcttct atgtcagccc 1400  
atctgtcctc agcgccttg tgcccagcat ggtagcagcc aagccagtgg 1450  
actgggaaga gagtccctc ttcaacagcc tgttccagct ctctgatggc 1500

tctaactact ttgtgcggct ctacacggag ccgctgctgg tgaacctgcc 1550  
gacaccggac ttcagcatgc cctacaacgt gatctgcctc acgtgcactg 1600  
tggtggccgt gtgtacggc tccttctaca atctcctcac ccgaaccttc 1650  
cacatcgagg agccccgcac aggtggcctg gccaaaggcg tgccaacctc 1700  
tatccggcgc gcccgaggtg tccccccact ctgattcttg ccctttccag 1750  
cagctgcagc tgccgtttct ctctggggag gggagcccaa gggctgtttc 1800  
tgccaactgc tctcctcaga gttggctttt gaaccaaagt gccttggaac 1850  
aggtcagggc ctacagctgt gttgtccagt acaggagcca cgagccaaat 1900  
gtggcatttg aatttgaatt aacttagaaa ttcatttctc cacctgtagt 1950  
ggccacctct atattgaggt gctcaataag caaaagtggc cggtggctgc 2000  
tgtattggac agcacagaaa aagatttcca tcaccacaga aaggctggct 2050  
ggcagcactg gccaaagtgat tgggggtgtc tacacagtgt atgtcactgt 2100  
gtagtggatg gagtttactg tttgtggaat aaaaacggct gtttccgtgg 2150  
aaaaaaaaaa aa 2162

<210> 340  
<211> 574  
<212> PRT  
<213> Homo sapiens

<400> 340  
Met Pro Leu Ala Leu Leu Val Leu Leu Leu Gly Pro Gly Gly  
1 5 10 15  
Trp Cys Leu Ala Glu Pro Pro Arg Asp Ser Leu Arg Glu Glu Leu  
20 25 30  
Val Ile Thr Pro Leu Pro Ser Gly Asp Val Ala Ala Thr Phe Gln  
35 40 45  
Phe Arg Thr Arg Trp Asp Ser Glu Leu Gln Arg Glu Gly Val Ser  
50 55 60  
His Tyr Arg Leu Phe Pro Lys Ala Leu Gly Gln Leu Ile Ser Lys  
65 70 75  
Tyr Ser Leu Arg Glu Leu His Leu Ser Phe Thr Gln Gly Phe Trp  
80 85 90  
Arg Thr Arg Tyr Trp Gly Pro Pro Phe Leu Gln Ala Pro Ser Gly  
95 100 105  
Ala Glu Leu Trp Val Trp Phe Gln Asp Thr Val Thr Asp Val Asp  
110 115 120  
Lys Ser Trp Lys Glu Leu Ser Asn Val Leu Ser Gly Ile Phe Cys  
125 130 135  
Ala Ser Leu Asn Phe Ile Asp Ser Thr Asn Thr Val Thr Pro Thr  
140 145 150

Ala Ser Phe Lys	Pro Leu Gly Leu Ala	Asn Asp Thr Asp His Tyr	155	160	165
Phe Leu Arg Tyr	Ala Val Leu Pro Arg	Glu Val Val Cys Thr Glu	170	175	180
Asn Leu Thr Pro	Trp Lys Lys Leu Leu	Pro Cys Ser Ser Lys Ala	185	190	195
Gly Leu Ser Val	Leu Leu Lys Ala Asp	Arg Leu Phe His Thr Ser	200	205	210
Tyr His Ser Gln	Ala Val His Ile Arg	Pro Val Cys Arg Asn Ala	215	220	225
Arg Cys Thr Ser	Ile Ser Trp Glu Leu	Arg Gln Thr Leu Ser Val	230	235	240
Val Phe Asp Ala	Phe Ile Thr Gly Gln	Gly Lys Lys Asp Trp Ser	245	250	255
Leu Phe Arg Met	Phe Ser Arg Thr Leu	Thr Glu Pro Cys Pro Leu	260	265	270
Ala Ser Glu Ser	Arg Val Tyr Val Asp	Ile Thr Thr Tyr Asn Gln	275	280	285
Asp Asn Glu Thr	Leu Glu Val His Pro	Pro Pro Thr Thr Thr Tyr	290	295	300
Gln Asp Val Ile	Leu Gly Thr Arg Lys	Thr Tyr Ala Ile Tyr Asp	305	310	315
Leu Leu Asp Thr	Ala Met Ile Asn Asn	Ser Arg Asn Leu Asn Ile	320	325	330
Gln Leu Lys Trp	Lys Arg Pro Pro Glu	Asn Glu Ala Pro Pro Val	335	340	345
Pro Phe Leu His	Ala Gln Arg Tyr Val	Ser Gly Tyr Gly Leu Gln	350	355	360
Lys Gly Glu Leu	Ser Thr Leu Leu Tyr	Asn Thr His Pro Tyr Arg	365	370	375
Ala Phe Pro Val	Leu Leu Leu Asp Thr	Val Pro Trp Tyr Leu Arg	380	385	390
Leu Tyr Val His	Thr Leu Thr Ile Thr	Ser Lys Gly Lys Glu Asn	395	400	405
Lys Pro Ser Tyr	Ile His Tyr Gln Pro	Ala Gln Asp Arg Leu Gln	410	415	420
Pro His Leu Leu	Glu Met Leu Ile Gln	Leu Pro Ala Asn Ser Val	425	430	435
Thr Lys Val Ser	Ile Gln Phe Glu Arg	Ala Leu Leu Lys Trp Thr	440	445	450
Glu Tyr Thr Pro	Asp Pro Asn His Gly	Phe Tyr Val Ser Pro Ser	455	460	465

Val Leu Ser Ala	Leu Val Pro Ser Met	Val Ala Ala Lys Pro Val
470		475 480
Asp Trp Glu Glu Ser	Pro Leu Phe Asn Ser	Leu Phe Pro Val Ser
485		490 495
Asp Gly Ser Asn Tyr	Phe Val Arg Leu Tyr	Thr Glu Pro Leu Leu
500		505 510
Val Asn Leu Pro Thr	Pro Asp Phe Ser Met	Pro Tyr Asn Val Ile
515		520 525
Cys Leu Thr Cys Thr	Val Val Ala Val Cys	Tyr Gly Ser Phe Tyr
530		535 540
Asn Leu Leu Thr Arg	Thr Phe His Ile Glu	Glu Pro Arg Thr Gly
545		550 555
Gly Leu Ala Lys Arg	Leu Ala Asn Leu Ile	Arg Arg Ala Arg Gly
560		565 570
Val Pro Pro Leu		

<210> 341  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 341  
 tggacaccgt accctggtat ctgc 24

<210> 342  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <221> Artificial Sequence  
 <222> 1-24  
 <223> Synthetic oligonucleotide probe

<400> 342  
 ccaactctga ggagagcaag tggc 24

<210> 343  
 <211> 44  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 343  
 tgtatgtgca caccctcacc atcacctcca agggcaagga gaac 44

<210> 344  
 <211> 762  
 <212> DNA  
 <213> Homo sapiens

<400> 344  
 caacatgggg tccagcagct tcttggtcct catggtgtct ctggttcttg 50  
 tgacctgggt ggctgtggaa ggagttaaag agggatataga gaaagcaggg 100  
 gtttccccag ctgacaacgt acgctgcttc aagtccgac ctccccagtg 150  
 tcacacagac caggactgtc tgggggaaag gaagtgtgtg tacctgcact 200  
 gtggcttcaa gtgtgtgatt cctgtgaagg aactggaaga aggaggaac 250  
 aaggatgaag atgtgtcaag gccataccct gagccaggat gggaggccaa 300  
 gtgtccaggc tctcctcteta ccagggtgtcc tcagaaatga tgctgggtcc 350  
 tttctacctc tgggggtcac tctcacttgg cacctgcccc tgagggtcct 400  
 gagacttga atagtgaaga agcaataccc aacccccca aagaaaacct 450  
 gagcttgaag tcttttccc caaaaagagg gaagagtcac aaaaagtcca 500  
 gaccccgagg acggtacttt cctctctac ctggtgctcc tccctaattg 550  
 tcatgaatgg acccctcatg aatgaaacca gtgcccttat aagagacccc 600  
 aaagagctgc ctggcccttc tgcaatgtgt gatcacagct agaaggcact 650  
 gtcagagaag agaaactggt cctcaccaga tgctgaatct gctggtgctc 700  
 tgatcttga cttcccagcc tctagaactg taagaaataa atatttgctg 750  
 tttataatcc aa 762

<210> 345  
 <211> 111  
 <212> PRT  
 <213> Homo sapiens

<400> 345  
 Met Gly Ser Ser Ser Phe Leu Val Leu Met Val Ser Leu Val Leu  
 1 5 10 15  
 Val Thr Leu Val Ala Val Glu Gly Val Lys Glu Gly Ile Glu Lys  
 20 25 30  
 Ala Gly Val Cys Pro Ala Asp Asn Val Arg Cys Phe Lys Ser Asp  
 35 40 45  
 Pro Pro Gln Cys His Thr Asp Gln Asp Cys Leu Gly Glu Arg Lys  
 50 55 60  
 Cys Cys Tyr Leu His Cys Gly Phe Lys Cys Val Ile Pro Val Lys  
 65 70 75  
 Glu Leu Glu Glu Gly Gly Asn Lys Asp Glu Asp Val Ser Arg Pro  
 80 85 90  
 Tyr Pro Glu Pro Gly Trp Glu Ala Lys Cys Pro Gly Ser Ser Ser  
 95 100 105  
 Thr Arg Cys Pro Gln Lys  
 110

<210> 346  
<211> 2528  
<212> DNA  
<213> Homo sapiens

<400> 346  
aaactcagca cttgccggag tggctcattg ttaagacaaa ggggtgtcac 50  
ttcctggcca ggaaacctga gcggtgagac tcccagctgc ctacatcaag 100  
gccccaggac atgcagaacc ttctcttaga acccgaccca ccaccatgag 150  
gtcctgcctg tggagatgca ggcacctgag ccaaggcgtc cagtggctct 200  
tgctcttggc tgtcctgggc ttctttctct tcgcttgcc ctcttttatt 250  
aaggagcctc aaacaaagcc ttccaggcat caacgcacag agaacattaa 300  
agaaaggctc ctacagtccc tggcaaagcc taagtcccag gacccacaa 350  
ggcgaggag gacaaccatc tatgcagagc cagcgccaga gaacaatgcc 400  
ctcaacacac aaaccagcc caaggccac accaccggag acagaggaaa 450  
ggaggccaac caggcacgc cggaggagca ggacaagggt cccacacag 500  
cacagagggc agcatggaag agcccagaaa aagagaaaac catgggtgac 550  
acactgtcac ccagaggga agatgcaggg atggcctctg gcaggacaga 600  
ggcacaatca tggaagagcc aggcacaaa gacgaccca ggaatgggg 650  
gccagaccag gaagctgacg gcctccagga cgggtgtcaga gaagcaccag 700  
ggcaaagcgg caaccacagc caagacgctc attccaaaa gtcagcacag 750  
aatgtcggct cccacaggag cagtgtcaac aaggacgaga cagaaaggag 800  
tgaccacagc agtcatccca cctaaggaga agaaacctca gggcaccccc 850  
ccccctgccc ctttccagag cccacgacg cagagaaacc aaagactgaa 900  
ggccgcgaac ttcaaatctg agcctcgggt ggatttttag gaaaaataca 950  
gcttcgaaat aggaggcctt cagacgactt gccctgactc tgtgaagatc 1000  
aaagcctcca agtcgctgtg gctccagaaa ctctttctgc ccaacctcac 1050  
tctcttctg gactccagac acttcaacca gagtgaagg gaccgctggt 1100  
aacactttgc accacccttt ggcttcatgg agctcaacta ctcttgggtg 1150  
cagaaggctg tgacacgctt cctccagtg cccacgacg agctgctcct 1200  
ggccagcctc cccgctggga gcctccggtg catcacctgt gccgtgggtg 1250  
gcaacggggg catcctgaac aactcccaca tgggccaagg gatagacagt 1300  
cacgactacg tgttccgatt gagcggagct ctcatataag gctacgaaca 1350  
ggatgtgggg actcggacat ccttctacgg ctttaccgcc ttctccctga 1400  
cccagtcact ccttatattg ggcaatcggg gtttcaagaa cgtgcctctt 1450



gggaaggacg tccgctactt gcacttcctg gaaggcaccg gggactatga 1500  
 gtggctggaa gcactgctta tgaatcagac ggtgatgtca aaaaaccttt 1550  
 tctgggtcag gcacagaccg caggaagcctt ttcgggaagc cctgcacatg 1600  
 gacagggtacc tgttgctgca ccagactttt ctccgatata tgaagaacag 1650  
 gtttctgagg tctaagaccg tggatggtgc ccactggagg atataccgcc 1700  
 ccaccactgg ggcctcctg ctgctcactg cocttcagct ctgtgaccag 1750  
 gtgagtgctt atggcttcac cactgagggc catgagcgct tttctgatca 1800  
 ctactatgat acatcatgga agcggctgat cttttacata aacctagact 1850  
 tcaagctgga gagagaagtc tggaagcggc tacacgatga agggataatc 1900  
 cggctgtacc agcgtcctgg tcccggaaact gccaaagcca agaactgacc 1950  
 gggggccaggg ctgccatggt ctccctgcct gctccaaggc acaggataca 2000  
 gtgggaatct tgagactctt tggccatttc ccatggctca gactaagctc 2050  
 caagcccttc aggagttcca agggaacact tgaacatgg acaagactct 2100  
 ctcaagatgg caaatggcta attgaggttc tgaagttctt cagtacattg 2150  
 ctgtaggtcc tgaggccagg gatttttaaat taaatggggt gatgggtggc 2200  
 caataccaca attcctgctg aaaaacactc ttccagtcca aaagcttctt 2250  
 gatacagaaa aaagagcctg gatttacaga aacatataga tctggtttga 2300  
 attccagatc gagtttacag ttgtgaaatc ttgaaggtat tacttaactt 2350  
 cactacagat tgtctagaag acctttctag gagttatctg attctagaag 2400  
 ggtctatact tgtccttgtc tttaagctat ttgacaactc tacgtgttgt 2450  
 agaaaaactga taataatata aatgattgtt gtccatggaa aggcataata 2500  
 attttctaca gtgaaaaaaa aaaaaaaa.2528

<210> 347

<211> 600

<212> PRT

<213> Homo sapiens

<400> 347

Met	Arg	Ser	Cys	Leu	Trp	Arg	Cys	Arg	His	Leu	Ser	Gln	Gly	Val
1				5					10				15	
Gln	Trp	Ser	Leu	Leu	Leu	Ala	Val	Leu	Val	Phe	Phe	Leu	Phe	Ala
			20						25				30	
Leu	Pro	Ser	Phe	Ile	Lys	Glu	Pro	Gln	Thr	Lys	Pro	Ser	Arg	His
			35						40				45	
Gln	Arg	Thr	Glu	Asn	Ile	Lys	Glu	Arg	Ser	Leu	Gln	Ser	Leu	Ala
			50						55				60	
Lys	Pro	Lys	Ser	Gln	Ala	Pro	Thr	Arg	Ala	Arg	Arg	Thr	Thr	Ile

	65		70		75
Tyr Ala Glu Pro	Ala Pro Glu Asn Asn	Ala Leu Asn Thr Gln	Thr		
	80	85	90		
Gln Pro Lys Ala	His Thr Thr Gly Asp Arg	Gly Lys Glu Ala Asn			
	95	100	105		
Gln Ala Pro Pro	Glu Glu Gln Asp Lys Val	Pro His Thr Ala Gln			
	110	115	120		
Arg Ala Ala Trp	Lys Ser Pro Glu Lys Glu	Lys Thr Met Val Asn			
	125	130	135		
Thr Leu Ser Pro	Arg Gly Gln Asp Ala Gly	Met Ala Ser Gly Arg			
	140	145	150		
Thr Glu Ala Gln	Ser Trp Lys Ser Gln Asp	Thr Lys Thr Thr Gln			
	155	160	165		
Gly Asn Gly Gly	Gln Thr Arg Lys Leu Thr	Ala Ser Arg Thr Val			
	170	175	180		
Ser Glu Lys His	Gln Gly Lys Ala Ala Thr	Thr Ala Lys Thr Leu			
	185	190	195		
Ile Pro Lys Ser	Gln His Arg Met Leu Ala	Pro Thr Gly Ala Val			
	200	205	210		
Ser Thr Arg Thr	Arg Gln Lys Gly Val Thr	Thr Ala Val Ile Pro			
	215	220	225		
Pro Lys Glu Lys	Lys Pro Gln Ala Thr Pro	Pro Pro Ala Pro Phe			
	230	235	240		
Gln Ser Pro Thr	Thr Gln Arg Asn Gln Arg	Leu Lys Ala Ala Asn			
	245	250	255		
Phe Lys Ser Glu	Pro Arg Trp Asp Phe Glu	Lys Tyr Ser Phe			
	260	265	270		
Glu Ile Gly Gly	Leu Gln Thr Thr Cys Pro	Asp Ser Val Lys Ile			
	275	280	285		
Lys Ala Ser Lys	Ser Leu Trp Leu Gln Lys	Leu Phe Leu Pro Asn			
	290	295	300		
Leu Thr Leu Phe	Leu Asp Ser Arg His Phe	Asn Gln Ser Glu Trp			
	305	310	315		
Asp Arg Leu Glu	His Phe Ala Pro Pro Phe	Gly Phe Met Glu Leu			
	320	325	330		
Asn Tyr Ser Leu	Val Gln Lys Val Val Thr	Arg Phe Pro Pro Val			
	335	340	345		
Pro Gln Gln Gln	Leu Leu Leu Ala Ser Leu	Pro Ala Gly Ser Leu			
	350	355	360		
Arg Cys Ile Thr	Cys Ala Val Val Gly Asn	Gly Gly Ile Leu Asn			
	365	370	375		
Asn Ser His Met	Gly Gln Glu Ile Asp Ser	His Asp Tyr Val Phe			

	380		385		390
Arg Leu Ser Gly	Ala Leu Ile Lys Gly Tyr	Glu Gln Asp Val Gly			
	395	400			
Thr Arg Thr Ser	Phe Tyr Gly Phe Thr Ala Phe Ser Leu Thr Gln				
	410	415			420
Ser Leu Leu Ile	Leu Gly Asn Arg Gly Phe Lys Asn Val Pro Leu				
	425	430			435
Gly Lys Asp Val	Arg Tyr Leu His Phe Leu Glu Gly Thr Arg Asp				
	440	445			450
Tyr Glu Trp Leu	Glu Ala Leu Leu Met Asn Gln Thr Val Met Ser				
	455	460			465
Lys Asn Leu Phe	Trp Phe Arg His Arg Pro Gln Glu Ala Phe Arg				
	470	475			480
Glu Ala Leu His	Met Asp Arg Tyr Leu Leu Leu His Pro Asp Phe				
	485	490			495
Leu Arg Tyr Met	Lys Asn Arg Phe Leu Arg Ser Lys Thr Leu Asp				
	500	505			510
Gly Ala His Trp	Arg Ile Tyr Arg Pro Thr Thr Gly Ala Leu Leu				
	515	520			525
Leu Leu Thr Ala	Leu Gln Leu Cys Asp Gln Val Ser Ala Tyr Gly				
	530	535			540
Phe Ile Thr Glu	Gly His Glu Arg Phe Ser Asp His Tyr Tyr Asp				
	545	550			555
Thr Ser Trp Lys	Arg Leu Ile Phe Tyr Ile Asn His Asp Phe Lys				
	560	565			570
Leu Glu Arg Glu	Val Trp Lys Arg Leu His Asp Glu Gly Ile Ile				
	575	580			585
Arg Leu Tyr Gln	Arg Pro Gly Pro Gly Thr Ala Lys Ala Lys Asn				
	590	595			600

<210> 348  
 <211> 496  
 <212> DNA  
 <213> Homo sapiens

<400> 348  
 cgatgcgcgg acccgggcac cccctcctcc tggggctgct gctgggtgctg 50  
 gggccttcgc cggagcagcg agtggaaatt gtctctcgag atctgaggat 100  
 gaaggacaag ttctaaaaac accttacagg cctcttttat ttagtccaa 150  
 agtgcagcaa acacttccat agactttatc acaacaccag agactgcacc 200  
 attcctgcat actataaaag atgcgccagg cttcttacct ggctggctgt 250  
 cagtccagtg tgcattggagg ataagtgagc agaccgtaca ggagcagcac 300  
 accgaggacc atgagaagtg ccttggaac caacaggga acagaactat 350

ctttatacac atcccccat ggacaagaga tttatttttg cagacagact 400  
 ctcccataag tcctttgagt tttgtatgtt gttgacagtt tgcagatata 450  
 tattcgataa atcagtgatc ttgacagtggt tatctgtcac ttattt 496

<210> 349  
 <211> 91  
 <212> PRT  
 <213> Homo sapiens

<400> 349  
 Met Arg Gly Pro Gly His Pro Leu Leu Leu Gly Leu Leu Leu Val  
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 Leu Gly Pro Ser Pro Glu Gln Arg Val Glu Ile Val Pro Arg Asp  
 20 25 30  
 Leu Arg Met Lys Asp Lys Phe Leu Lys His Leu Thr Gly Pro Leu  
 35 40 45  
 Tyr Phe Ser Pro Lys Cys Ser Lys His Phe His Arg Leu Tyr His  
 50 55 60  
 Asn Thr Arg Asp Cys Thr Ile Pro Ala Tyr Tyr Lys Arg Cys Ala  
 65 70 75  
 Arg Leu Leu Thr Arg Leu Ala Val Ser Pro Val Cys Met Glu Asp  
 80 85 90  
 Lys

<210> 350  
 <211> 1141  
 <212> DNA  
 <213> Homo sapiens

<400> 350  
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 ttctctggga ggcccgcacc cgccgcgcgc cagccccacc catgccacc 100  
 gcggggctcc gccgggcccgc gcgcctcacc gcaatcgctc tgttgggtgct 150  
 gggggctccc ctggtgctgg ccggcgagga ctgcctgtgg tacctggacc 200  
 ggaatggctc ctggcatccg gggtttaact gcgagttctt cacctctgc 250  
 tgcgggacct gctaccatcg gtactgctgc agggacctga ccttgcttat 300  
 caccgagagg cagcagaagc actgcctggc cttcagcccc aagaccatag 350  
 caggcatcgc ctcagctgtg atcctctttg ttgctgtggt tgccaccacc 400  
 atctgctgct tcctctgttc ctgttgctac ctgtacgcgc ggcgccagca 450  
 gctccagagc ccatttgaag gccaggagat tccaatgaca ggcattcccag 500  
 tgcagccagt ataccatcac cccagggacc ccaaagctgg cctgtcacc 550  
 ccacagcctg gcttcatgta ccacacctag ggtcctgctc ccaatatcc 600

actctaccca gctgggcccc cagtctacaa cctgcagct cctcctccct 650  
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 tetgtgtccc cttcagtgat gccaaccttg ggagatgccc tcactctgta 750  
 cctgcatctg gtctctggggg tggcaggagt cctccagcca ccaggcccca 800  
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 aacaggagct gaactagaac tatgaggggt tggggggagg gcttggaatt 900  
 atgggctatt ttactgggg gcaaggagg gagatgacag cctgggtcac 950  
 agtgctgtt ttcaaatagt ccctctgctc ccaagatccc agccaggaag 1000  
 gctggggccc tactgtttgt cccctctggg ctgggggtgg gggaggagg 1050  
 aggttcctgc agcagctggc agtagccctc ctctctggt gccccactgg 1100  
 ccacatctct ggctgctag attaaagctg taaagacaaa a 1141

<210> 351  
 <211> 197  
 <212> PRT  
 <213> Homo sapiens

<400> 351  
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 Ala Leu Leu Val Leu Gly Ala Pro Leu Val Leu Ala Gly Glu Asp  
 20 25 30  
 Cys Leu Trp Tyr Leu Asp Arg Asn Gly Ser Trp His Pro Gly Phe  
 35 40 45  
 Asn Cys Glu Phe Phe Thr Phe Cys Cys Gly Thr Cys Tyr His Arg  
 50 55 60  
 Tyr Cys Cys Arg Asp Leu Thr Leu Leu Ile Thr Glu Arg Gln Gln  
 65 70 75  
 Lys His Cys Leu Ala Phe Ser Pro Lys Thr Ile Ala Gly Ile Ala  
 80 85 90  
 Ser Ala Val Ile Leu Phe Val Ala Val Val Ala Thr Thr Ile Cys  
 95 100 105  
 Cys Phe Leu Cys Ser Cys Cys Tyr Leu Tyr Arg Arg Arg Gln Gln  
 110 115 120  
 Leu Gln Ser Pro Phe Glu Gly Gln Glu Ile Pro Met Thr Gly Ile  
 125 130 135  
 Pro Val Gln Pro Val Tyr Pro Tyr Pro Gln Asp Pro Lys Ala Gly  
 140 145 150  
 Pro Ala Pro Pro Gln Pro Gly Phe Met Tyr Pro Pro Ser Gly Pro  
 155 160 165  
 Ala Pro Gln Tyr Pro Leu Tyr Pro Ala Gly Pro Pro Val Tyr Asn  
 170 175 180

Pro Ala Ala Pro Pro Pro Tyr Met Pro Pro Gln Pro Ser Tyr Pro  
185 190 195

Gly Ala

<210> 352  
<211> 3226  
<212> DNA  
<213> Homo sapiens

<400> 352  
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ggggcccccag aaccccagggt aggtagagca agaagatggt gtttctgccc 100  
ctcaaatggt cccttgcaac catgtcattt ctactttcct cactgttggc 150  
tctcttaact gtgtccactc cttcatgggtg tcagagcaact gaagcatctc 200  
caaaacgtag tgatgggaca ccatttcctt ggaataaaat acgacttcct 250  
gagtagctca tcccagttca ttatgatctc ttgatccatg caaaccttac 300  
cacgctgacc ttctggggaa ccacgaaagt agaaatcaca gccagtcagc 350  
ccaccagcac catcatcctg catagtcacc acctgcagat atctaggggc 400  
accctcagga agggagctgg agagaggcta toggagaagc ccctgcaggt 450  
cctggaacac cccctcagg agcaaattgc actgctggct cccgagcccc 500  
tcctgtctgg gctcccgtag acagttgtca ttcactatgc tggcaactct 550  
toggagactt tccacgatt ttacaaaagc acctacagaa ccaaggaagg 600  
ggaactgagg atactagcat caacacaatt tgaaccact gcagctagaa 650  
tggcctttcc ctgctttgat gaacctgcct tcaaagcaag tttctcaatc 700  
aaaattagaa gagagccaag gcacctagcc atctccaata tgccattggt 750  
gaaatctgtg actgttgctg aaggactcat agaagacct tttgatgtca 800  
ctgtgaagat gagcacctat ctgggtgcct tcatcattc agatttttag 850  
tctgtcagca agataacca gagtgagtc aaggttttctg tttatgctgt 900  
gccagacaag ataaatcaag cagattatgc actggatgct ggggtgactc 950  
ttctagaatt ttatgaggat tatttcagca taccgtatcc cctacccaaa 1000  
caagatcttg ctgctattcc cgaacttcag tctggtgcta tggaaaactg 1050  
gggactgaca acatatagag aatctgctct gttgtttgat gcagaaaagt 1100  
cttctgcac cagtaagcct ggcatcacag tgactgtggc ccatgaactg 1150  
gccaccaggt ggtttgggaa cctggtcact atgggaatggt ggaatgatct 1200  
ttggctaagt gaaggatttg ccaaatttat ggagttttgt tctgtcagtg 1250  
tgacccatcc tgaactgaaa gttggagatt atttcttttg caaatgtttt 1300

gacgcaatgg aggtagatgc tttaaattcc tcacaccctg tgtctacacc 1350  
 tgtggaaaat cctgctcaga tccgggagat gtttgatgat gtttcttatg 1400  
 ataagggagc ttgtattctg aatatgctaa gggagtatct tagcgctgac 1450  
 gcatttaaaa gtggtattgt acagtatctc cagaagcata gctataaaaa 1500  
 tacaaaaaac gaggacctgt gggatagtat ggcaagtatt tgcacctacag 1550  
 atggtgtaaa agggatggat ggcttttgct ctagaagtca acattcatct 1600  
 tcatcctcac attggcatca ggaaggggtg gatgtgaaaa ccatgatgaa 1650  
 caactggaca ctgcagaggg gttttccctc aataaccatc acagtgaggg 1700  
 ggaggaatgt acacatgaag caagagcact acatgaaggg ctctgacggc 1750  
 gccccggaca ctgggtacct gtggcatggt ccattgacat tcatcaccag 1800  
 caaatccaac atgggtccatc gatttttgct aaaaacaaaa acagatgtgc 1850  
 tcatctctcc agaagaggtg gaatggatca aatttaatgt gggcatgaat 1900  
 ggctattaca ttgtgcatta cgaggatgat ggatgggact ctttgactgg 1950  
 ccttttaaaa ggaacacaca cagcagtcag cagtaatgat cgggcaagtc 2000  
 tcattaacaa tgcatttcag ctogtcagca ttgggaagct gtccattgaa 2050  
 aaggccttgg atttatccct gtacttgaaa catgaaactg aaattatgcc 2100  
 cgtgtttcaa ggtttgaatg agctgattcc tatgtataag ttaatggaga 2150  
 aaagagatat gaatgaagtg gaaactcaat tcaaggcctt cctcatcagg 2200  
 ctgctaaggg acctcattga taagcagaca tggacagacg agggctcagt 2250  
 ctcagagcaa atgctgcgga gtgaactact actcctcgcc tgtgtgcaca 2300  
 actatcagcc gtgcgtacag agggcagaag gctatttcag aaagtgggaag 2350  
 gaatccaatg gaaacttgag cctgcctgtc gacgtgacct tggcagtggt 2400  
 tgcgtgtggg gccagagca cagaaggctg ggattttctt tatagtaaat 2450  
 atcagtttct ttgtccagt actgagaaaa gccaaattga atttgccctc 2500  
 tgcagaaccc aaaataagga aaagcttcaa tggctactag atgaaagctt 2550  
 taaggagat aaaataaaaa ctcaggagtt tccacaaatt cttacactca 2600  
 ttggcaggaa cccagtagga taccactggt cctggcaatt tctgagggaa 2650  
 aactggaaca aactgtaca aaagtttgaa cttgggtcat cttccatagc 2700  
 ccacatggta atgggtacaa caaatcaatt ctccacaaga acacggcttg 2750  
 aagaggtaaa aggattcttc agctcttga aagaaaatgg ttctcagctc 2800  
 cgttgtgtcc aacagacaat tgaaaccatt gaagaaaaca tcggttggt 2850  
 ggataagaat ttgtataaaa tcagagtggt gctgcaaggt gaaaagcttg 2900

aacgtatgta aaaattcctc ccttgcccggt ttcctgttat ctetaatoac 2950  
 caacattttg ttgagtgtat tttaaacta gagatggctg ttttggtcc 3000  
 aactggagat acttttttcc cttcaactca ttttttgact atccctgtga 3050  
 aaagaatagc tggtagtttt tcatgaatgg gctttttcat gaatgggcta 3100  
 tcgctacat gtgttttgtt catcacaggt gttgccctgc aacgtaaac 3150  
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 aaaaaaaaa aaaaaaaaa aaaaaa 3226

<210> 353  
 <211> 941  
 <212> PRT  
 <213> Homo sapiens

<400> 353  
 Met Val Phe Leu Pro Leu Lys Trp Ser Leu Ala Thr Met Ser Phe  
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 Leu Leu Ser Ser Leu Leu Ala Leu Leu Thr Val Ser Thr Pro Ser  
 20 25 30  
 Trp Cys Gln Ser Thr Glu Ala Ser Pro Lys Arg Ser Asp Gly Thr  
 35 40 45  
 Pro Phe Pro Trp Asn Lys Ile Arg Leu Pro Glu Tyr Val Ile Pro  
 50 55 60  
 Val His Tyr Asp Leu Leu Ile His Ala Asn Leu Thr Thr Leu Thr  
 65 70 75  
 Phe Trp Gly Thr Thr Lys Val Glu Ile Thr Ala Ser Gln Pro Thr  
 80 85 90  
 Ser Thr Ile Ile Leu His Ser His His Leu Gln Ile Ser Arg Ala  
 95 100 105  
 Thr Leu Arg Lys Gly Ala Gly Glu Arg Leu Ser Glu Glu Pro Leu  
 110 115 120  
 Gln Val Leu Glu His Pro Pro Gln Glu Gln Ile Ala Leu Leu Ala  
 125 130 135  
 Pro Glu Pro Leu Leu Val Gly Leu Pro Tyr Thr Val Val Ile His  
 140 145 150  
 Tyr Ala Gly Asn Leu Ser Glu Thr Phe His Gly Phe Tyr Lys Ser  
 155 160 165  
 Thr Tyr Arg Thr Lys Glu Gly Glu Leu Arg Ile Leu Ala Ser Thr  
 170 175 180  
 Gln Phe Glu Pro Thr Ala Ala Arg Met Ala Phe Pro Cys Phe Asp  
 185 190 195  
 Glu Pro Ala Phe Lys Ala Ser Phe Ser Ile Lys Ile Arg Arg Glu  
 200 205 210  
 Pro Arg His Leu Ala Ile Ser Asn Met Pro Leu Val Lys Ser Val



215										220					225				
Thr	Val	Ala	Glu	Gly	Leu	Ile	Glu	Asp	His	Phe	Asp	Val	Thr	Val					
				230					235					240					
Lys	Met	Ser	Thr	Tyr	Leu	Val	Ala	Phe	Ile	Ile	Ser	Asp	Phe	Glu					
				245					250					255					
Ser	Val	Ser	Lys	Ile	Thr	Lys	Ser	Gly	Val	Lys	Val	Ser	Val	Tyr					
				260					265					270					
Ala	Val	Pro	Asp	Lys	Ile	Asn	Gln	Ala	Asp	Tyr	Ala	Leu	Asp	Ala					
				275					280					285					
Ala	Val	Thr	Leu	Leu	Glu	Phe	Tyr	Glu	Asp	Tyr	Phe	Ser	Ile	Pro					
				290					295					300					
Tyr	Pro	Leu	Pro	Lys	Gln	Asp	Leu	Ala	Ala	Ile	Pro	Asp	Phe	Gln					
				305					310					315					
Ser	Gly	Ala	Met	Glu	Asn	Trp	Gly	Leu	Thr	Thr	Tyr	Arg	Glu	Ser					
				320					325					330					
Ala	Leu	Leu	Phe	Asp	Ala	Glu	Lys	Ser	Ser	Ala	Ser	Ser	Lys	Leu					
				335					340					345					
Gly	Ile	Thr	Val	Thr	Val	Ala	His	Glu	Leu	Ala	His	Gln	Trp	Phe					
				350					355					360					
Gly	Asn	Leu	Val	Thr	Met	Glu	Trp	Trp	Asn	Asp	Leu	Trp	Leu	Asn					
				365					370					375					
Glu	Gly	Phe	Ala	Lys	Phe	Met	Glu	Phe	Val	Ser	Val	Ser	Val	Thr					
				380					385					390					
His	Pro	Glu	Leu	Lys	Val	Gly	Asp	Tyr	Phe	Phe	Gly	Lys	Cys	Phe					
				395					400					405					
Asp	Ala	Met	Glu	Val	Asp	Ala	Leu	Asn	Ser	Ser	His	Pro	Val	Ser					
				410					415					420					
Thr	Pro	Val	Glu	Asn	Pro	Ala	Gln	Ile	Arg	Glu	Met	Phe	Asp	Asp					
				425					430					435					
Val	Ser	Tyr	Asp	Lys	Gly	Ala	Cys	Ile	Leu	Asn	Met	Leu	Arg	Glu					
				440					445					450					
Tyr	Leu	Ser	Ala	Asp	Ala	Phe	Lys	Ser	Gly	Ile	Val	Gln	Tyr	Leu					
				455					460					465					
Gln	Lys	His	Ser	Tyr	Lys	Asn	Thr	Lys	Asn	Glu	Asp	Leu	Trp	Asp					
				470					475					480					
Ser	Met	Ala	Ser	Ile	Cys	Pro	Thr	Asp	Gly	Val	Lys	Gly	Met	Asp					
				485					490					495					
Gly	Phe	Cys	Ser	Arg	Ser	Gln	His	Ser	Ser	Ser	Ser	Ser	His	Trp					
				500					505					510					
His	Gln	Glu	Gly	Val	Asp	Val	Lys	Thr	Met	Met	Asn	Thr	Trp	Thr					
				515					520					525					
Leu	Gln	Arg	Gly	Phe	Pro	Leu	Ile	Thr	Ile	Thr	Val	Arg	Gly	Arg					

Asn Val His Met	530	Lys Gln Glu His Tyr	535	Met Lys Gly Ser Asp	540	Gly	555
Ala Pro Asp Thr	545	Gly Tyr Leu Trp His	550	Val Pro Leu Thr Phe	555	Ile	570
Thr Ser Lys Ser	560	Asn Met Val His Arg	565	Phe Leu Leu Lys Thr	570	Lys	585
Thr Asp Val Leu	575	Ile Leu Pro Glu Glu	580	Val Glu Trp Ile Lys	585	Phe	600
Asn Val Gly Met	590	Asn Gly Tyr Tyr Ile	595	Val His Tyr Glu Asp	600	Asp	615
Gly Trp Asp Ser	605	Leu Thr Gly Leu Leu	610	Lys Gly Thr His Thr	615	Ala	630
Val Ser Ser Asn	620	Asp Arg Ala Ser Leu	625	Ile Asn Asn Ala Phe	630	Gln	645
Leu Val Ser Ile	635	Gly Lys Leu Ser Ile	640	Glu Lys Ala Leu Asp	645	Leu	660
Ser Leu Tyr Leu	650	Lys His Glu Thr Glu	655	Ile Met Pro Val Phe	660	Gln	675
Gly Leu Asn Glu	665	Leu Ile Pro Met Tyr	670	Lys Leu Met Glu Lys	675	Arg	690
Asp Met Asn Glu	680	Val Glu Thr Gln Phe	685	Lys Ala Phe Leu Ile	690	Arg	705
Leu Leu Arg Asp	695	Leu Ile Asp Lys Gln	700	Thr Trp Thr Asp Glu	705	Gly	720
Ser Val Ser Glu	710	Gln Met Leu Arg Ser	715	Glu Leu Leu Leu Leu	720	Ala	735
Cys Val His Asn	725	Tyr Gln Pro Cys Val	730	Gln Arg Ala Glu Gly	735	Tyr	750
Phe Arg Lys Trp	740	Lys Glu Ser Asn Gly	745	Asn Leu Ser Leu Pro	750	Val	765
Asp Val Thr Leu	755	Ala Val Phe Ala Val	760	Gly Ala Gln Ser Thr	765	Glu	780
Gly Trp Asp Phe	770	Leu Tyr Ser Lys Tyr	775	Gln Phe Ser Leu Ser	780	Ser	795
Thr Glu Lys Ser	785	Gln Ile Glu Phe Ala	790	Leu Cys Arg Thr Gln	795	Asn	810
Lys Glu Lys Leu	800	Gln Trp Leu Leu Asp	805	Glu Ser Phe Lys Gly	810	Asp	825
Lys Ile Lys Thr	815	Gln Glu Phe Pro Gln	820	Ile Leu Thr Leu Ile	825	Gly	840
Arg Asn Pro Val	830	Gly Tyr Pro Leu Ala	835	Trp Gln Phe Leu Arg	840	Lys	

	845		850		855
Asn Trp Asn Lys	Leu Val Gln Lys Phe	Glu Leu Gly Ser Ser	860	865	870
Ile Ala His Met	Val Met Gly Thr Thr	Asn Gln Phe Ser Thr	875	880	885
Thr Arg Leu Glu	Glu Val Lys Gly Phe	Phe Ser Ser Leu Lys	890	895	900
Asn Gly Ser Gln	Leu Arg Cys Val Gln	Gln Thr Ile Glu Thr	905	910	915
Glu Glu Asn Ile	Gly Trp Met Asp Lys	Asn Phe Asp Lys Ile	920	925	930
Val Trp Leu Gln	Ser Glu Lys Leu Glu	Arg Met	935	940	

<210> 354  
 <211> 1587  
 <212> DNA  
 <213> Homo sapiens

<400> 354  
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 tcctctctcc actgccagga gtgcaggcgc tgcctctgcca gtttgggaca 100  
 gttcagcatg tgtggaaggt gtccgacctc ccccggaat ggaccocctaa 150  
 gaacaccagc tgcgacagcg gcttgggggt ccaggacacg ttgatgctca 200  
 ttgagagcgg accccaagtg agcctggtgc tctccaaggg ctgcacggag 250  
 gccaaaggacc aggagcccg cgtcactgag caccggatgg gccccggcct 300  
 ctccctgatc tctacacct tcgtgtgccg ccaggaggac ttctgaaca 350  
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 ggatccttga ggtgccagct ctgcttgtct atggaaggct gtctggaggg 450  
 gacaacagaa gagatctgcc ccaaggggac cacacactgt tatgatggcc 500  
 tctcaggct cagggggagga ggcatcttct ccaatctgag agtccaggga 550  
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 gccctggggt atgactgaga actgcaatag gaaagatttt ctgacctgtc 650  
 atogggggac caccattatg acacacggaa acttggtctca agaaccact 700  
 gattggacca catcgaatac cgagatgtgc gaggtggggc aggtgtgtca 750  
 ggagacgctg ctgctcatag atgtaggact cacatcaacc ctgggtggga 800  
 caaaaggctg cagcactgtt ggggtcmeta attccagaa gaccaccatc 850  
 cactcagccc ctctcggggt gcttctggcc tctataccc acttctgtct 900  
 ctcgacactg tgcaatagtc ccagcagcag cagcgttctg ctgaactccc 950

tccctctca agctgcccc gtcccaggag accggcagtg tctacctgt 1000  
 gtgcagcccc ttggaacctg ttcaagtggc tccccccgaa tgacctgcc 1050  
 cagggggcgc actcattgtt atgatgggta cattcatctc tcaggagggtg 1100  
 ggctgtccac caaaatgagc attcagggtc gcgtggccca acctccagc 1150  
 ttctgttga accacaccag aaaaatcggg atcttctctg cgcgtgagaa 1200  
 gcgtgatgtg cagcctcctg cctctcagca tgaggagggt ggggtgagg 1250  
 gcctggagtc tctcacttgg ggggtggggc tggcactggc cccagcgtg 1300  
 tgggtgggag tggtttggcc ttctctgctaa ctctattacc cccacgattc 1350  
 ttcacggctg ctgaccaccc aactcaacc tccctctgac ctcataacct 1400  
 aatggccttg gacaccagat tctttcccat tctgtccatg aatcatcttc 1450  
 cccacacaca atcattcata tctactacc taacagcaac actggggaga 1500  
 gcctggagca tccggacttg cctatggga gaggggacgc tggaggagt 1550  
 gctgcatgta tctgataata cagaccctgt cctttca 1587

<210> 355

<211> 437

<212> PRT

<213> Homo sapiens

<400> 355

Met	Ser	Ala	Val	Leu	Leu	Leu	Ala	Leu	Leu	Gly	Phe	Ile	Leu	Pro
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Leu	Pro	Gly	Val	Gln	Ala	Leu	Leu	Cys	Gln	Phe	Gly	Thr	Val	Gln
				20					25					30
His	Val	Trp	Lys	Val	Ser	Asp	Leu	Pro	Arg	Gln	Trp	Thr	Pro	Lys
				35					40					45
Asn	Thr	Ser	Cys	Asp	Ser	Gly	Leu	Gly	Cys	Gln	Asp	Thr	Leu	Met
				50					55					60
Leu	Ile	Glu	Ser	Gly	Pro	Gln	Val	Ser	Leu	Val	Leu	Ser	Lys	Gly
				65					70					75
Cys	Thr	Glu	Ala	Lys	Asp	Gln	Glu	Pro	Arg	Val	Thr	Glu	His	Arg
				80					85					90
Met	Gly	Pro	Gly	Leu	Ser	Leu	Ile	Ser	Tyr	Thr	Phe	Val	Cys	Arg
				95					100					105
Gln	Glu	Asp	Phe	Cys	Asn	Asn	Leu	Val	Asn	Ser	Leu	Pro	Leu	Trp
				110					115					120
Ala	Pro	Gln	Pro	Pro	Ala	Asp	Pro	Gly	Ser	Leu	Arg	Cys	Pro	Val
				125					130					135
Cys	Leu	Ser	Met	Glu	Gly	Cys	Leu	Glu	Gly	Thr	Thr	Glu	Glu	Ile
				140					145					150
Cys	Pro	Lys	Gly	Thr	Thr	His	Cys	Tyr	Asp	Gly	Leu	Leu	Arg	Leu

155	160	165
Arg Gly Gly Gly Ile Phe Ser Asn Leu	Arg Val Gln Gly Cys Met	
170	175	180
Pro Gln Pro Gly Cys Asn Leu Leu Asn	Gly Thr Gln Glu Ile Gly	
185	190	195
Pro Val Gly Met Thr Glu Asn Cys Asn	Arg Lys Asp Phe Leu Thr	
200	205	210
Cys His Arg Gly Thr Thr Ile Met Thr	His Gly Asn Leu Ala Gln	
215	220	225
Glu Pro Thr Asp Trp Thr Thr Ser Asn	Thr Glu Met Cys Glu Val	
230	235	240
Gly Gln Val Cys Gln Glu Thr Leu Leu	Leu Ile Asp Val Gly Leu	
245	250	255
Thr Ser Thr Leu Val Gly Thr Lys Gly	Cys Ser Thr Val Gly Ala	
260	265	270
Gln Asn Ser Gln Lys Thr Thr Ile His	Ser Ala Pro Pro Gly Val	
275	280	285
Leu Val Ala Ser Tyr Thr His Phe Cys	Ser Ser Asp Leu Cys Asn	
290	295	300
Ser Ala Ser Ser Ser Ser Val Leu Leu	Asn Ser Leu Pro Pro Gln	
305	310	315
Ala Ala Pro Val Pro Gly Asp Arg Gln	Cys Pro Thr Cys Val Gln	
320	325	330
Pro Leu Gly Thr Cys Ser Ser Gly Ser	Pro Arg Met Thr Cys Pro	
335	340	345
Arg Gly Ala Thr His Cys Tyr Asp Gly	Tyr Ile His Leu Ser Gly	
350	355	360
Gly Gly Leu Ser Thr Lys Met Ser Ile	Gln Gly Cys Val Ala Gln	
365	370	375
Pro Ser Ser Phe Leu Leu Asn His Thr	Arg Gln Ile Gly Ile Phe	
380	385	390
Ser Ala Arg Glu Lys Arg Asp Val Gln	Pro Pro Ala Ser Gln His	
395	400	405
Glu Gly Gly Gly Ala Glu Gly Leu Glu	Ser Leu Thr Trp Gly Val	
410	415	420
Gly Leu Ala Leu Ala Pro Ala Leu Trp	Trp Gly Val Val Cys Pro	
425	430	435

Ser Cys

<210> 356  
 <211> 1238  
 <212> DNA  
 <213> Homo sapiens

<400> 356  
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 tcagcctggc cttcctgtca ctgctgccat ctggacatcc tcagccgggt 150  
 ggcgatgacg cctgctctgt gcagatcctc gtccctggcc tcaaggggga 200  
 tgcgggagag aagggagaca aaggcgcccc cggacggcct ggaagagtcg 250  
 gccccacggg agaaaaagga gacatggggg acaagagaca gaaaggcagt 300  
 gtgggtgcgc atggaaaaat tgggtccatt ggctctaaag gtgagaaagg 350  
 agattccggt gacataggac cccctgggtc taatggagaa ccaggcctcc 400  
 catgtgagtg cagccagctg cgcaaggcca tcggggagat ggacaaccag 450  
 gtctctcagc tgaccagcga gctcaagttc atcaagaatg ctgtcgccgg 500  
 tgtgcgcgag acggagagca agatctacct gctggtgaag gaggagaagc 550  
 gctacgcgga cggccagctg tcctgccagg gccgcggggg cacgctgagc 600  
 atgcccaagg acgaggtctg caatggcctg atggccgcat acctggcgca 650  
 agccgcgctg gcccggtgtc tcacggcat caacgacctg gagaaggagg 700  
 gcgccttcgt gtactctgac cactccccc tgcggacctt caacaagtgg 750  
 cgcagcgggt agcccaaca tgacctagac gaggaggact gcgtggagat 800  
 ggtggcctcg ggcgggtgga acgacgtggc ctgccacacc accatgtact 850  
 tcatgtgtga gtttgacaag gagaacatgt gaggcctcag ctgggggtgc 900  
 ccattggggg ccccacatgt cctgcaggg ttggcaggga cagagccag 950  
 accatgggtc cagccaggga gctgtccctc tgtgaagggt ggaggctcac 1000  
 tgagtagagg gctgttgtct aaactgagaa aatggcctat gcttaaggagg 1050  
 aaaaagaa tggtcctggg gtgctgtctc tgaagaagca gagtttcatt 1100  
 acctgtattg tagccccaat gtcattatgt aattattacc cagaattgct 1150  
 cttccataaa gcttgtgcct ttgtccaagc tatacataa aatctttaag 1200  
 tagtgcagta gttaagtcca aaaaaaaaa aaaaaaaaa 1238

<210> 357  
 <211> 271  
 <212> PRT  
 <213> Homo sapiens

<400> 357  
 Met Arg Gly Asn Leu Ala Leu Val Gly Val Leu Ile Ser Leu Ala  
 1 5 10 15  
 Phe Leu Ser Leu Leu Pro Ser Gly His Pro Gln Pro Ala Gly Asp  
 20 25 30

Asp	Ala	Cys	Ser	Val	Gln	Ile	Leu	Val	Pro	Gly	Leu	Lys	Gly	Asp	
				35					40					45	
Ala	Gly	Glu	Lys	Gly	Asp	Lys	Gly	Ala	Pro	Gly	Arg	Pro	Gly	Arg	
				50					55					60	
Val	Gly	Pro	Thr	Gly	Glu	Lys	Gly	Asp	Met	Gly	Asp	Lys	Gly	Gln	
				65					70					75	
Lys	Gly	Ser	Val	Gly	Arg	His	Gly	Lys	Ile	Gly	Pro	Ile	Gly	Ser	
				80					85					90	
Lys	Gly	Glu	Lys	Gly	Asp	Ser	Gly	Asp	Ile	Gly	Pro	Pro	Gly	Pro	
				95					100					105	
Asn	Gly	Glu	Pro	Gly	Leu	Pro	Cys	Glu	Cys	Ser	Gln	Leu	Arg	Lys	
				110					115					120	
Ala	Ile	Gly	Glu	Met	Asp	Asn	Gln	Val	Ser	Gln	Leu	Thr	Ser	Glu	
				125					130					135	
Leu	Lys	Phe	Ile	Lys	Asn	Ala	Val	Ala	Gly	Val	Arg	Glu	Thr	Glu	
				140					145					150	
Ser	Lys	Ile	Tyr	Leu	Leu	Val	Lys	Glu	Glu	Lys	Arg	Tyr	Ala	Asp	
				155					160					165	
Ala	Gln	Leu	Ser	Cys	Gln	Gly	Arg	Gly	Gly	Thr	Leu	Ser	Met	Pro	
				170					175					180	
Lys	Asp	Glu	Ala	Ala	Asn	Gly	Leu	Met	Ala	Ala	Tyr	Leu	Ala	Gln	
				185					190					195	
Ala	Gly	Leu	Ala	Arg	Val	Phe	Ile	Gly	Ile	Asn	Asp	Leu	Glu	Lys	
				200					205					210	
Glu	Gly	Ala	Phe	Val	Tyr	Ser	Asp	His	Ser	Pro	Met	Arg	Thr	Phe	
				215					220					225	
Asn	Lys	Trp	Arg	Ser	Gly	Glu	Pro	Asn	Asn	Ala	Tyr	Asp	Glu	Glu	
				230					235					240	
Asp	Cys	Val	Glu	Met	Val	Ala	Ser	Gly	Gly	Trp	Asn	Asp	Val	Ala	
				245					250					255	
Cys	His	Thr	Thr	Met	Tyr	Phe	Met	Cys	Glu	Phe	Asp	Lys	Glu	Asn	
				260					265					270	

Met

<210> 358  
 <211> 972  
 <212> DNA  
 <213> Homo sapiens

<400> 358  
 agtgactgca gccttctctag atccctctcca ctcggtttct ctctttgcag 50  
 gagcaccggc agcaccagtg tgtgaggggg gcaggcagcg gtcctagcca 100  
 gttccttgat cctgccagac caccagcccc ccggcacaga gctgctccac 150

aggcaccatg aggatcatgc tgctattcac agccatcctg gccttcagcc 200  
 tagctcagag ctttggggct gtctgtaagg agccacagga ggagggtggt 250  
 cctggcgggg gccgcagcaa gagggatcca gatctctacc agctgtccca 300  
 gagactcttc aaaagccact catctctgga gggattgctc aaagccctga 350  
 gccaggctag cacagatcct aaggaatcaa catctcccga gaaacgtgac 400  
 atgcatgact tctttgtggg acttatgggc aagaggagcg tccagccaga 450  
 gggaaagaca ggacctttct taccttcagt gaggggtcct cgcccccttc 500  
 atcccaatca gcttggatcc acaggaaagt cttccctggg aacagaggag 550  
 cagagacctt tataagactc tctacgggat gtgaatcaag agaacgtccc 600  
 cagctttggc atctccaagt atcccccgag agcagaatag gtactccact 650  
 tccggactcc tggactgcat taggaagacc tctttccctg tcccaatccc 700  
 cagggtgcga cgctcctgtt accctttctc ttcctgttcc ttgtaacatt 750  
 cttgtgcttt gactcctctt ccatcttttc tacctgaccc tgggtgtggaa 800  
 actgcatagt gaatatcccc aaccccaatg ggcattgact gtagaatacc 850  
 cttagagtcc tgtagtgtcc tacattaaaa atataatgtc tctctctatt 900  
 cctcaacaat aaaggatttt tgcataatgaa aaaaaaaaaa aaaaaaaaaa 950  
 aaaaaaaaaa aaaaaaaaaa aa 972

<210> 359  
 <211> 135  
 <212> PRT  
 <213> Homo sapiens

<400> 359  
 Met Arg Ile Met Leu Leu Phe Thr Ala Ile Leu Ala Phe Ser Leu  
 1 5 10 15  
 Ala Gln Ser Phe Gly Ala Val Cys Lys Glu Pro Gln Glu Glu Val  
 20 25 30  
 Val Pro Gly Gly Arg Ser Lys Arg Asp Pro Asp Leu Tyr Gln  
 35 40 45  
 Leu Leu Gln Arg Leu Phe Lys Ser His Ser Ser Leu Glu Gly Leu  
 50 55 60  
 Leu Lys Ala Leu Ser Gln Ala Ser Thr Asp Pro Lys Glu Ser Thr  
 65 70 75  
 Ser Pro Glu Lys Arg Asp Met His Asp Phe Phe Val Gly Leu Met  
 80 85 90  
 Gly Lys Arg Ser Val Gln Pro Glu Gly Lys Thr Gly Pro Phe Leu  
 95 100 105  
 Pro Ser Val Arg Val Pro Arg Pro Leu His Pro Asn Gln Leu Gly  
 110 115 120



Ser Thr Gly Lys Ser Ser Leu Gly Thr Glu Glu Gln Arg Pro Leu  
125 130 135

<210> 360  
<211> 1738  
<212> DNA  
<213> Homo sapiens

<400> 360  
gggcgtctcc ggctgctcct attgagctgt ctgctcgctg tgcccgtgt 50  
gctgctgtg cccgcgtgt cgcgctgct accgcgtctg ctggacgcgg 100  
gagacgcag cgagctggtg attggagccc tgcggagagc tcaagcgccc 150  
agctctgccc caggagccca ggctgcccog tgagtcccat agttgctgca 200  
ggagtggagc catgagctgc gtccctgggtg gtgtcatccc cttggggctg 250  
ctgttctctg tctgcggatc ccaaggctac ctccctgccca acgtcactct 300  
cttagaggag ctgctcagca aataccagca caacgagtct cactcccggg 350  
tccgcagagc catcccccagg gaggacaagg aggagatcct catgctgcac 400  
aacaagcttc ggggccagggt gcagcctcag gcctccaaca tggagtacat 450  
ggtgagcgcc ggctccggcc gcagaggctg gcacgggggg tggggccttg 500  
gccaccagcc tgctctgttc ccagccagc tctgttcccc agccagtgcg 550  
tgtatggct ggctcagggt ctccctctggc aggggaggat ccgggctctg 600  
ttctgttttg tttgtttgtt ttgagacagg gtctcactct gccactgacg 650  
ctggagtgca atggcacaat cgtcatgccc tgaaacetta gactcccggg 700  
gttaagcgat cctgcttcag cctcccaagt agctggaact acaggcatgc 750  
accatggtgc ccagctagat tttaaatatt ttgtggagat gggggctctg 800  
ctacgttgcc caggctggtc ttgaactcct aggctcaagc aatcctcctg 850  
cctcagcctc tcaaagtgtc aggattatag gcatgagtca cctgtctggt 900  
ctctggctct gttcttaaca ttctgccaaa acaacacacg tgggttcctt 950  
gtgcagagcc tgccctggtg ccttcattgc actcttggtg gctccactgg 1000  
gaacacagct ctacgccttt ccacactgga ggcagagtgg ggagggggccc 1050  
agggtggggc tttgctgatg ctgatctcag ctgtgccaca cgctagctgc 1100  
accacactga cttctcctta gcccggtgtg gccctcacttt ccacttgagg 1150  
agtccttctc cgcgtggttg ccatgactgt gagataagtc gagctgtgta 1200  
agggcccgcc acagactgac ctgcctcccc aacccctagg ctttgctaac 1250  
cgggaaagga gctaacggtg acagaagaca gccaaagtca accctcccg 1300  
gtgattgtga tgggtgttcc aggtgtggtt gggcgatgct gctacttgac 1350

cccaagctcc agtgtggaaa ctctcttccct ggctgggtttt ccagaactac 1400  
 agaggaatgg accacagtct tccagggtcc ctctcgtcc accaacoggg 1450  
 agcctccacc ttggccatcc gtcagctatg aatggctttt taaacaaacc 1500  
 cactgtccag cctgggtaac atggtaaagc cccgtctcta caaaaaaatc 1550  
 caagtttagcc gggcatgggtg gtgcgcacct gtagtccag ctgcagtggg 1600  
 actgaggtgg aggtggaggt ggggggtggg agctgaggaa ggaggatcgc 1650  
 ttgagcctgg gaagtcgagg ctgcagtggg ctgagattgc accactgcac 1700  
 tccagcctgg gtgacagagc aagaccctgt ctcaaaaa 1738

<210> 361  
 <211> 159  
 <212> PRT  
 <213> Homo sapiens

<400> 361  
 Met Ser Cys Val Leu Gly Gly Val Ile Pro Leu Gly Leu Leu Phe  
 1 5 10 15  
 Leu Val Cys Gly Ser Gln Gly Tyr Leu Leu Pro Asn Val Thr Leu  
 20 25 30  
 Leu Glu Glu Leu Leu Ser Lys Tyr Gln His Asn Glu Ser His Ser  
 35 40 45  
 Arg Val Arg Arg Ala Ile Pro Arg Glu Asp Lys Glu Glu Ile Leu  
 50 55 60  
 Met Leu His Asn Lys Leu Arg Gly Gln Val Gln Pro Gln Ala Ser  
 65 70 75  
 Asn Met Glu Tyr Met Val Ser Ala Gly Ser Gly Arg Arg Gly Trp  
 80 85 90  
 His Arg Gly Trp Gly Leu Gly His Gln Pro Ala Leu Phe Pro Ser  
 95 100 105  
 Gln Leu Cys Ser Pro Ala Ser Ala Cys Asp Gly Trp Leu Arg Val  
 110 115 120  
 Ser Ser Gly Arg Gly Gly Ser Arg Leu Cys Ser Val Leu Phe Val  
 125 130 135  
 Cys Phe Glu Thr Gly Ser His Ser Ala Thr Asp Ala Gly Val Gln  
 140 145 150  
 Trp His Asn Arg His Ala Leu Lys Pro  
 155

<210> 362  
 <211> 422  
 <212> DNA  
 <213> Homo sapiens

<400> 362  
 aaggagaggc caccgggact tcaagtgtctc ctccatccca ggagcgcagt 50

ggccactatg gggctctggc tgccccttgt cctcctcttg accctccttg 100  
gcagctcaca tggaacaggc cgggtatga ctttgcaact gaagctgaag 150  
gagtcctttc tgacaaattc ctccatgatg tccagcttcc tgggaattgct 200  
tgaaaagctc tgccctctcc tccatctccc ttcaggagacc agcgtcacc 250  
tccaccatgc aagatctcaa caccatgttg tctgcaacac atgacagcca 300  
ttgaagctcg tgtccttctt ggcccgggct tttgggccgg ggatgcagga 350  
ggcaggcccc gacctgtct ttcagcaggc cccacccctc ctgagtggca 400  
ataaataaaa ttcggtatgc tg 422

<210> 363  
<211> 78  
<212> PRT  
<213> Homo sapiens

<400> 363  
Met Gly Ser Gly Leu Pro Leu Val Leu Leu Leu Thr Leu Leu Gly  
1 5 10 15  
Ser Ser His Gly Thr Gly Pro Gly Met Thr Leu Gln Leu Lys Leu  
20 25 30  
Lys Glu Ser Phe Leu Thr Asn Ser Ser Tyr Glu Ser Ser Phe Leu  
35 40 45  
Glu Leu Leu Glu Lys Leu Cys Leu Leu Leu His Leu Pro Ser Gly  
50 55 60  
Thr Ser Val Thr Leu His His Ala Arg Ser Gln His His Val Val  
65 70 75  
Cys Asn Thr

<210> 364  
<211> 826  
<212> DNA  
<213> Homo sapiens

<400> 364  
aattgtatct gtgtaattgt aaaacaaacg aaataaaata gaaggaaaaa 50  
ctttctgagt ttcaaaaaca acagactagt actctaaaga actctttaa 100  
acaattaact gtaggattg cagttatgat tggatattat ttaattctgt 150  
ttctgatgtg gggttcctcc actgtgttct ggtgtgtatt aatatttacc 200  
attgcagaag ctccattcag tgttgaaaat gaatgcttag tggatctgtg 250  
cctcttacgc atatgttaca aattatctgg agttcctaata caatgcagag 300  
ttcccctccc ctccgattgt tctaaataat tgaagatgt ctgctgtgga 350  
aaaaggcatg tatttaaate tgtatgattc tcaaccatct ttagtgtgga 400  
aaggtccttg aaagccaatg gaaatacttt ttttttttct tggcactaat 450

caagtgagtg ttaccttttc acttagtagg atgtgttgtt acgctagtaa 500  
aatagaaacc tgtgtttatt ctacaggtatt ttagaaacaa cagccatcat 550  
tttattttat gtgtgtgttc ttggctgtat tcataaatta tatattttgg 600  
gctatcaaat attacttcat tcaatataaa taacaatagt agaagttgtt 650  
tacttagata tgctttctag ttgcattttc tcagcctatg taagactact 700  
ttgttgaat agcctttgaa atttacagta ctgtctctct actatcttca 750  
gattacttga ttcaataaaa ccaattatgt ttgtaattga tattaataaa 800  
accagaataa aagttcatat ctaccc 826

<210> 365

<211> 67

<212> PRT

<213> Homo sapiens

<400> 365

Met	Ile	Gly	Tyr	Tyr	Leu	Ile	Leu	Phe	Leu	Met	Trp	Gly	Ser	Ser
1					5				10				15	
Thr	Val	Phe	Cys	Val	Leu	Leu	Ile	Phe	Thr	Ile	Ala	Glu	Ala	Ser
				20					25				30	
Phe	Ser	Val	Glu	Asn	Glu	Cys	Leu	Val	Asp	Leu	Cys	Leu	Leu	Arg
				35					40				45	
Ile	Cys	Tyr	Lys	Leu	Ser	Gly	Val	Pro	Asn	Gln	Cys	Arg	Val	Pro
				50					55				60	
Leu	Pro	Ser	Asp	Cys	Ser	Lys								
				65										

<210> 366

<211> 2475

<212> DNA

<213> Homo sapiens

<400> 366

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tgagacatcc ttgagaagag ccacagcata agagactgcc ctgcttggtg 100  
ttttgcagga tgatgtgtgc octtcgagga gcttctgcat tgctgttct 150  
gttccttgca gctttttctg ccccgccgca gtgtaccag gaccagcca 200  
tggtgcatta catctaccag cgctttogag tcttgaggca agggctggaa 250  
aatgtatccc aagcaacgag ggcatacatt caagaattcc aagagtctc 300  
aaaaaatata tctgtcatgc tgggaagatg tcagacctac acaagtgagt 350  
acaagagtgc agtgggtaac ttggcactga gagtgaacg tgccaacgg 400  
gagattgact acatacaata ccttcgagag gctgacgagt gcactgtatc 450  
agaggacaag aactggcgag aaatgttgct ccaagaagct gaagaagaga 500

aaaagatccg gactctgctg aatgcaagct gtgacaacat gctgatgggc 550  
 ataaagtctt tgaataatgt gaagaagatg atggacacac atggctcttg 600  
 gatgaaagat gctgtctata actctccaaa ggtgtactta ttaattggat 650  
 ccagaaacaa cactgtttgg gaatttgcaa acatacgggc attcatggag 700  
 gataaacacca agccagctcc ccggaagcaa atcctaacac tttcctggca 750  
 gggaacaggc caagtatct acaaggttt tctatTTTT cataccaaag 800  
 caactctaa tgagataatc aaatataacc tgcagaagag gactgtggaa 850  
 gatcgaatgc tgctcccagg aggggtaggc cgagcattgg tttaccagca 900  
 ctccccctca acttacattg acctggctgt ggaatgagcat gggctctggg 950  
 ccacccactc tgggccaggc acccatagcc atttggttct cacaagatt 1000  
 gagccgggca cactgggagt ggagcattca tgggataccc catgcagaag 1050  
 ccaggatgct gaagcctcat tcctcttggt tggggttctc tatgtggtct 1100  
 acagtactgg gggccagggc cctcatcgca tcacctgcat ctatgatcca 1150  
 ctgggcaacta tcagtggaga ggacttgccc aacttggtct tccccaaag 1200  
 accaagaagt cactccatga tccattacaa cccagagat aagcagctct 1250  
 atgcctggaa tgaaggaac cagatcattt acaaaactca gacaaagaga 1300  
 aagctgctc tgaagtaatg cattacagct gtgagaaga gcaactgtgc 1350  
 tttggcagct gttctacagg acagtggaggc tatagccct tcacaatata 1400  
 gtatccctct aatcacacac aggaagagtg tgtagaagtg gaaatacgta 1450  
 tgccctcttt cccaaatgtc actgccttag gtatcttcca agagcttaga 1500  
 tgagagcata tcatcaggaa agtttcaaca atgtccatta ctccccaaa 1550  
 cctcctggct ctcaaggatg accacattct gatacagcct acttcaagcc 1600  
 ttttgtttta ctgctcccca gcatttactg taactctgcc atcttccctc 1650  
 ccacaattag agttgtatgc cagccctaa tatteaccac tggcttttct 1700  
 ctccctgggc ctttgctgaa gctcttccct ctttttcaaa tgtctattga 1750  
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 tttcttttct tttttttgag acaagggtctc actatgttgc ccaggctgg 1850  
 ctcaaaactcc agagctcaag agatcctcct gctcagcct cctaagtacc 1900  
 tgggattaca ggcatgtgcc accacacctg gcttaaaata ctatttctta 1950  
 ttgaggttta acctctattt cccctagccc tgtccttcca ctaagcttgg 2000  
 tagatgtaat aataaagta aaatattaac atttgaatat cgctttccag 2050  
 gtgtggagtg tttgcacatc attgaattct cgtttcacct ttgtgaaca 2100

tgcacaagtc ttacagctg tcattctaga gtttaggtga gtaacacaa 2150  
 tacaaagtga aagatacagc tagaaaatac tacaaatccc atagtttttc 2200  
 cattgcccaa ggaagcatca aatacgtatg ttgttcacc tactcttata 2250  
 gtcaatgcgt tcatcgtttc agcctaaaaa taatagtctg tccctttagc 2300  
 cagttttcat gtctgcacaa gacctttcaa taggcctttc aaatgataat 2350  
 tcctccagaa aaccagtcta agggtaggga ccccaactct agcctctct 2400  
 tgtctgtctg tcctctgttt ctctctttct gctttaaat caataaaagt 2450  
 gacactgagc aaaaaaaaaa aaaaa 2475

<210> 367  
 <211> 402  
 <212> PRT  
 <213> Homo sapiens

<400> 367  
 Met Met Val Ala Leu Arg Gly Ala Ser Ala Leu Leu Val Leu Phe  
 1 5 10 15  
 Leu Ala Ala Phe Leu Pro Pro Pro Gln Cys Thr Gln Asp Pro Ala  
 20 25 30  
 Met Val His Tyr Ile Tyr Gln Arg Phe Arg Val Leu Glu Gln Gly  
 35 40 45  
 Leu Glu Lys Cys Thr Gln Ala Thr Arg Ala Tyr Ile Gln Glu Phe  
 50 55 60  
 Gln Glu Phe Ser Lys Asn Ile Ser Val Met Leu Gly Arg Cys Gln  
 65 70 75  
 Thr Tyr Thr Ser Glu Tyr Lys Ser Ala Val Gly Asn Leu Ala Leu  
 80 85 90  
 Arg Val Glu Arg Ala Gln Arg Glu Ile Asp Tyr Ile Gln Tyr Leu  
 95 100 105  
 Arg Glu Ala Asp Glu Cys Ile Val Ser Glu Asp Lys Thr Leu Ala  
 110 115 120  
 Glu Met Leu Leu Gln Glu Ala Glu Glu Glu Lys Lys Ile Arg Thr  
 125 130 135  
 Leu Leu Asn Ala Ser Cys Asp Asn Met Leu Met Gly Ile Lys Ser  
 140 145 150  
 Leu Lys Ile Val Lys Lys Met Met Asp Thr His Gly Ser Trp Met  
 155 160 165  
 Lys Asp Ala Val Tyr Asn Ser Pro Lys Val Tyr Leu Leu Ile Gly  
 170 175 180  
 Ser Arg Asn Asn Thr Val Trp Glu Phe Ala Asn Ile Arg Ala Phe  
 185 190 195  
 Met Glu Asp Asn Thr Lys Pro Ala Pro Arg Lys Gln Ile Leu Thr  
 200 205 210

Leu Ser Trp Gln Gly Thr Gly Gln Val Ile Tyr Lys Gly Phe Leu  
 215 225  
 Phe Phe His Asn Gln Ala Thr Ser Asn Glu Ile Ile Lys Tyr Asn  
 230 235 240  
 Leu Gln Lys Arg Thr Val Glu Asp Arg Met Leu Leu Pro Gly Gly  
 245 250 255  
 Val Gly Arg Ala Leu Val Tyr Gln His Ser Pro Ser Thr Tyr Ile  
 260 265 270  
 Asp Leu Ala Val Asp Glu His Gly Leu Trp Ala Ile His Ser Gly  
 275 280 285  
 Pro Gly Thr His Ser His Leu Val Leu Thr Lys Ile Glu Pro Gly  
 290 295 300  
 Thr Leu Gly Val Glu His Ser Trp Asp Thr Pro Cys Arg Ser Gln  
 305 310 315  
 Asp Ala Glu Ala Ser Phe Leu Leu Cys Gly Val Leu Tyr Val Val  
 320 325 330  
 Tyr Ser Thr Gly Gly Gln Gly Pro His Arg Ile Thr Cys Ile Tyr  
 335 340 345  
 Asp Pro Leu Gly Thr Ile Ser Glu Glu Asp Leu Pro Asn Leu Phe  
 350 355 360  
 Phe Pro Lys Arg Pro Arg Ser His Ser Met Ile His Tyr Asn Pro  
 365 370 375  
 Arg Asp Lys Gln Leu Tyr Ala Trp Asn Glu Gly Asn Gln Ile Ile  
 380 385 390  
 Tyr Lys Leu Gln Thr Lys Arg Lys Leu Pro Leu Lys  
 395 400

<210> 368  
 <211> 2281  
 <212> DNA  
 <213> Homo sapiens

<400> 368  
 gggcgccgc gtactcacta gctgaggtgg cagtgggtcc accaacatgg 50  
 agctctcgca gatgtcggag ctcatggggc tgcggtgtt gcttgggtg 100  
 ctggccctga tggcgacggc ggcggtagcg cgggggtggc tgcgcgcg 150  
 ggaggagagg agcggccggc ccgcctgcc aaaaagcaaat ggattccac 200  
 ctgacaaatc ttctgggatcc aagaagcaga aacaatatca cgggattcgg 250  
 aaggagaagc ctcaacaaca caacttcacc caccgcotcc tggctgcagc 300  
 tctgaagagc cacagcggga acatatcttg catggacttt agcagcaatg 350  
 gcaaatacct ggctacctgt gcagatgac gcaccatccg catctggagc 400  
 accaaggact tctgcagcg agagcaccgc agcatgagag ccaacgtgga 450

gctggaccac gccaccctgg tgcgcttcag cctgactgc agagccttca 500  
 tcgtctggct ggccaacggg gacaccctcc gtgtcttcaa gatgaccaag 550  
 cgggaggatg ggggctacac cttcacagcc accccagagg acttccttaa 600  
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 ggtcaaagtgc tgtctaccat caacaccaac cagatgaaca acacacacgc 750  
 tgctgtatct cctgtggca gatttgtagc ctogtgggc ttcaccccag 800  
 atgtgaaggt ttgggaagtc tgccttggaa agaaggggga gttccaggag 850  
 gtggtgcgag ccttcgaact aaagggccac tcgcggctg tgcactcgtt 900  
 tgccttctcc aacgactcac ggaggatggc ttctgtctcc aaggatggta 950  
 catggaaact gtgggacaca gatgtggaat acaagaagaa gcaggacccc 1000  
 tacttctga agacaggccg ctttgaagag gcggcgggtg ccgcgcgtg 1050  
 ccgcctggcc ctctccccc acgccagggt cttggccttg gccagtggca 1100  
 gtagtattca tctctacaat acccggcggg gcgagaagga ggagtgcctt 1150  
 gagcgggtcc atggcgagtg tatcgccaac ttgtccttg acatcactgg 1200  
 ccgctttctg gcctcctgtg gggaccgggc ggtgcggctg ttccacaaca 1250  
 ctctggcca ccgagccatg gtggaggaga tgcagggcca cctgaagcgg 1300  
 gcctccaacg agagcacccg ccagaggctg cagcagcagc tgaccaggc 1350  
 ccaagagacc ctgaagagcc tgggtgcct gaagaagtga ctctgggagg 1400  
 gcccgcgca gaggattgag gaggagggat ctggcctct catggcactg 1450  
 ctgccatctt tcctcccagg tggaaacctt tcagaaggag tctcctggtt 1500  
 ttcttactgg tggccctgt tcttccatt gaaactactt ttgtctactt 1550  
 aggtctctct cttctgtctg gctgtgactc ctccctgact agtggccaag 1600  
 gtgctttct tcctcccagg ccagtggtt ggaatctgtc cccaactggc 1650  
 actgaggaga atggtagaga ggagaggaga gagagagaga atgtgatttt 1700  
 tggccttgtg gcagcacatc ctccaccca aagaagtttg taaatgttcc 1750  
 agaacaacct agagaacacc tgagtactaa gcagcagttt tgcaaggatg 1800  
 ggagactggg atagcttccc atcacagaac tgtgttccat caaaaagaca 1850  
 ctaagggtt tcctctggg cctcagttct atttgaaga tggagaataa 1900  
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 agtccccagg tctggaagaa aagtagaaaa gagtagtact attgtccaat 2000  
 gtcataaag tggtaaaagt gggaaccagt gtgccttgaa accaaattag 2050



aaacacattc cttgggaagg caaagttttc tgggacttga tcatacattt 2100  
 tatatgggtt ggacttctct cttcgggaga tgatatcttg ttttaaggaga 2150  
 cctcttttca gttcatcaag ttcacatgat atttgagtgc ccactctgtg 2200  
 cccaaataaa tatgagctgt ggattaaaaa aaaaaaaaaa aaaaaaaaaa 2250  
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<210> 369

<211> 447

<212> PRT

<213> Homo sapiens

<400> 369

Met	Glu	Leu	Ser	Gln	Met	Ser	Glu	Leu	Met	Gly	Leu	Ser	Val	Leu
1				5					10					15
Leu	Gly	Leu	Leu	Ala	Leu	Met	Ala	Thr	Ala	Ala	Val	Ala	Arg	Gly
				20					25					30
Trp	Leu	Arg	Ala	Gly	Glu	Glu	Arg	Ser	Gly	Arg	Pro	Ala	Cys	Gln
				35					40					45
Lys	Ala	Asn	Gly	Phe	Pro	Pro	Asp	Lys	Ser	Ser	Gly	Ser	Lys	Lys
				50					55					60
Gln	Lys	Gln	Tyr	Gln	Arg	Ile	Arg	Lys	Glu	Lys	Pro	Gln	Gln	His
				65					70					75
Asn	Phe	Thr	His	Arg	Leu	Leu	Ala	Ala	Ala	Leu	Lys	Ser	His	Ser
				80					85					90
Gly	Asn	Ile	Ser	Cys	Met	Asp	Phe	Ser	Ser	Asn	Gly	Lys	Tyr	Leu
				95					100					105
Ala	Thr	Cys	Ala	Asp	Asp	Arg	Thr	Ile	Arg	Ile	Trp	Ser	Thr	Lys
				110					115					120
Asp	Phe	Leu	Gln	Arg	Glu	His	Arg	Ser	Met	Arg	Ala	Asn	Val	Glu
				125					130					135
Leu	Asp	His	Ala	Thr	Leu	Val	Arg	Phe	Ser	Pro	Asp	Cys	Arg	Ala
				140					145					150
Phe	Ile	Val	Trp	Leu	Ala	Asn	Gly	Asp	Thr	Leu	Arg	Val	Phe	Lys
				155					160					165
Met	Thr	Lys	Arg	Glu	Asp	Gly	Gly	Tyr	Thr	Phe	Thr	Ala	Thr	Pro
				170					175					180
Glu	Asp	Phe	Pro	Lys	Lys	His	Lys	Ala	Pro	Val	Ile	Asp	Ile	Gly
				185					190					195
Ile	Ala	Asn	Thr	Gly	Lys	Phe	Ile	Met	Thr	Ala	Ser	Ser	Asp	Thr
				200					205					210
Thr	Val	Leu	Ile	Trp	Ser	Leu	Lys	Gly	Gln	Val	Leu	Ser	Thr	Ile
				215					220					225
Asn	Thr	Asn	Gln	Met	Asn	Asn	Thr	His	Ala	Ala	Val	Ser	Pro	Cys
				230					235					240

Gly	Arg	Phe	Val	Ala	Ser	Cys	Gly	Phe	Thr	Pro	Asp	Val	Lys	Val	245	250
Trp	Glu	Val	Cys	Phe	Gly	Lys	Lys	Gly	Glu	Phe	Gln	Glu	Val	Val	260	265
Arg	Ala	Phe	Glu	Leu	Lys	Gly	His	Ser	Ala	Ala	Val	His	Ser	Phe	275	280
Ala	Phe	Ser	Asn	Asp	Ser	Arg	Arg	Met	Ala	Ser	Val	Ser	Lys	Asp	290	295
Gly	Thr	Trp	Lys	Leu	Trp	Asp	Thr	Asp	Val	Glu	Tyr	Lys	Lys	Lys	305	310
Gln	Asp	Pro	Tyr	Leu	Leu	Lys	Thr	Gly	Arg	Phe	Glu	Glu	Ala	Ala	320	325
Gly	Ala	Ala	Pro	Cys	Arg	Leu	Ala	Leu	Ser	Pro	Asn	Ala	Gln	Val	335	340
Leu	Ala	Leu	Ala	Ser	Gly	Ser	Ser	Ile	His	Leu	Tyr	Asn	Thr	Arg	350	355
Arg	Gly	Glu	Lys	Glu	Glu	Cys	Phe	Glu	Arg	Val	His	Gly	Glu	Cys	365	370
Ile	Ala	Asn	Leu	Ser	Phe	Asp	Ile	Thr	Gly	Arg	Phe	Leu	Ala	Ser	380	385
Cys	Gly	Asp	Arg	Ala	Val	Arg	Leu	Phe	His	Asn	Thr	Pro	Gly	His	395	400
Arg	Ala	Met	Val	Glu	Glu	Met	Gln	Gly	His	Leu	Lys	Arg	Ala	Ser	410	415
Asn	Glu	Ser	Thr	Arg	Gln	Arg	Leu	Gln	Gln	Gln	Leu	Thr	Gln	Ala	425	430
Gln	Glu	Thr	Leu	Lys	Ser	Leu	Gly	Ala	Leu	Lys	Lys				440	445

<210> 370  
 <211> 1415  
 <212> DNA  
 <213> Homo sapiens

<400> 370  
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 catctaagca ggcagtgttt tgccttcacc ccaagtgaacc atgagagggtg 100  
 ccacgcgagt ctcaatcatg ctcttcctag taactgtgtc tgactgtgct 150  
 gtgatcacag gggcctgtga gcgggatgtc cagtgtgggg caggcacctg 200  
 ctgtgccatc agcctgtggc ttcgagggtc gcggtgtgtc accccgctgg 250  
 ggcgggaagg cgaggagtgc caccocggca gccacaagggt ccccttcttc 300  
 aggaaacgca agcaccacac ctgtccttgc ttgccaacc tgctgtgtctc 350  
 caggttcccc gacggcagggt accgctgtctc catggacttg aagaacatca 400

atttttaggc gcttgccctgg tctcaggata cccaccatcc ttttctgag 450  
 cacagcctgg atttttattt ctgccatgaa acccagctcc catgactctc 500  
 ccagtcctta cactgactac cctgatctct ctgtcttagt acgcacatat 550  
 gcacacaggc agacatacct cccatcatga catggteccc aggctggcct 600  
 gaggatgtca cagcttgagg ctgtggtgtg aaaggtggcc agcctggctc 650  
 tcttccctgc tcaggctgcc agagaggtgg taaatggcag aaaggacatt 700  
 cccctcccc tcccagggtg acctgctctc tttcctgggc cctgcccctc 750  
 tcccacatg tatccctcgg tctgaattag acattcctgg gcacaggctc 800  
 ttgggtgcat tgctcagagt cccaggctct ggctgaccc tcaggccctt 850  
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 tggttaactc cttagtttca gaccacagac tcaagattgg ctcttcccag 950  
 agggcagcag acagtcaccc caaggcaggt gtaggggagcc caggagggcc 1000  
 aatcagcccc ctgaagactc tggteccagt cagcctgtgg cttgtggcct 1050  
 gtgacctgtg accttctgcc agaattgtca tgccctctgag gccctctctt 1100  
 accacacttt accagttaac cactgaagcc cccaattccc acagcttttc 1150  
 cattaaaaatg caaatgggtg tggttcaatc taatctgata ttgacatatt 1200  
 agaagccaat taggggtgtt ccttaaacaa ctcccttcca aggatcagcc 1250  
 ctgagagcag gttggtgact ttgaggaggg cagtctctg tccagattgg 1300  
 ggtgggagca agggacaggg agcagggcag gggctgaaag ggcactgat 1350  
 tcagaccagg gaggaacta cacaccaaca tgctggcttt agaataaaag 1400  
 caccaactga aaaaa 1415

<210> 371  
 <211> 105  
 <212> PRT  
 <213> Homo sapiens

<400> 371  
 Met Arg Gly Ala Thr Arg Val Ser Ile Met Leu Leu Val Thr  
 1 5 10 15  
 Val Ser Asp Cys Ala Val Ile Thr Gly Ala Cys Glu Arg Asp Val  
 20 25 30  
 Gln Cys Gly Ala Gly Thr Cys Cys Ala Ile Ser Leu Trp Leu Arg  
 35 40 45  
 Gly Leu Arg Met Cys Thr Pro Leu Gly Arg Glu Gly Glu Glu Cys  
 50 55 60  
 His Pro Gly Ser His Lys Val Pro Phe Phe Arg Lys Arg Lys His  
 65 70 75

His	Thr	Cys	Pro	Cys	Leu	Pro	Asn	Leu	Leu	Cys	Ser	Arg	Phe	Pro
				80					85					90
Asp	Gly	Arg	Tyr	Arg	Cys	Ser	Met	Asp	Leu	Lys	Asn	Ile	Asn	Phe
				95					100					105

<210> 372  
 <211> 1281  
 <212> DNA  
 <213> Homo sapiens

<400> 372  
 agcgcccggtg cgtcggggcg gtaaaaggcc ggcagaaggg aggcacttga 50  
 gaaatgtctt tcctccagga cccaagtttc ttcaccatgg ggatgtggtc 100  
 cattgggtgca ggagccctgg gggctgctgc cttggcattg ctgcttgcca 150  
 acacagacgt gtttctgtcc aagccccaga aagcggccct ggagtacctg 200  
 gaggatatag acctgaaaac actggagaag gaaccaagga ctttcaaagc 250  
 aaaggagcta tgggaaaaaa atggagctgt gattatggcc gtgcggaggc 300  
 caggctgttt cctctgtcga gaggaagctg cggatctgtc ctccctgaaa 350  
 agcatgttgg accagctggg cgtccccctc tatgcagtgg taaaggagca 400  
 catcaggact gaagtgaagg atttccagcc ttatttcaaa ggagaaatct 450  
 tcctggatga aaagaaaaag ttctatggtc cacaaaggcg gaagatgatg 500  
 tttatgggat ttatcgtct gggagtgtgg tacaacttct tccgagcctg 550  
 gaacggaggc ttctctggaa acctggaagg agaaggcttc atccttgggg 600  
 gagttttcgt ggtgggatca ggaagcagg gcattcttct tgagcaccga 650  
 gaaaaagaat ttggagacaa agtaaaccta ctttctgttc tggaaagctgc 700  
 taagatgatc aaaccacaga ctttggcctc agagaaaaaa tgattgtgtg 750  
 aaactgcccc gctcagggat aaccagggac attcacctgt gttcatggga 800  
 tgtattgttt ccaactgtgt cctaaggag tgagaaaccc atttatactc 850  
 tactctcagt atggattatt aatgtatttt aatattctgt ttaggccacc 900  
 taaggcaaaa tagcccaaaa acaagactga aaaaaatctg aaaaactaat 950  
 gaggattatt aagctaaaac ctgggaaata ggaggcttaa aattgactgc 1000  
 caggctgggt gcagtggctc acacctgtaa tccagcactc ttggagggcc 1050  
 aaggtagaca agtcacttga ggtcgggagt tcgagaccag cctgagcaac 1100  
 atggcgaaac ccctgtctca ctaaaaatac aaaaatcacc cgggtgtggt 1150  
 ggcaggcacc ttagtctcca gctaccgggg aggctgaggc aggagaatca 1200  
 cttgaacctg ggaggtggag gttgcgggtg gctgagatca caccactgta 1250  
 ttccagcctg ggtgactgag actctaacta a 1281

<210> 373  
 <211> 229  
 <212> PRT  
 <213> Homo sapiens

<400> 373  
 Met Ser Phe Leu Gln Asp Pro Ser Phe Phe Thr Met Gly Met Trp  
 1 5 10 15  
 Ser Ile Gly Ala Gly Ala Leu Gly Ala Ala Leu Ala Leu Leu  
 20 25 30  
 Leu Ala Asn Thr Asp Val Phe Leu Ser Lys Pro Gln Lys Ala Ala  
 35 40 45  
 Leu Glu Tyr Leu Glu Asp Ile Asp Leu Lys Thr Leu Glu Lys Glu  
 50 55 60  
 Pro Arg Thr Phe Lys Ala Lys Glu Leu Trp Glu Lys Asn Gly Ala  
 65 70 75  
 Val Ile Met Ala Val Arg Arg Pro Gly Cys Phe Leu Cys Arg Glu  
 80 85 90  
 Glu Ala Ala Asp Leu Ser Ser Leu Lys Ser Met Leu Asp Gln Leu  
 95 100 105  
 Gly Val Pro Leu Tyr Ala Val Val Lys Glu His Ile Arg Thr Glu  
 110 115 120  
 Val Lys Asp Phe Gln Pro Tyr Phe Lys Gly Glu Ile Phe Leu Asp  
 125 130 135  
 Glu Lys Lys Lys Phe Tyr Gly Pro Gln Arg Arg Lys Met Met Phe  
 140 145 150  
 Met Gly Phe Ile Arg Leu Gly Val Trp Tyr Asn Phe Phe Arg Ala  
 155 160 165  
 Trp Asn Gly Gly Phe Ser Gly Asn Leu Glu Gly Glu Gly Phe Ile  
 170 175 180  
 Leu Gly Gly Val Phe Val Val Gly Ser Gly Lys Gln Gly Ile Leu  
 185 190 195  
 Leu Glu His Arg Glu Lys Glu Phe Gly Asp Lys Val Asn Leu Leu  
 200 205 210  
 Ser Val Leu Glu Ala Ala Lys Met Ile Lys Pro Gln Thr Leu Ala  
 215 220 225  
 Ser Glu Lys Lys

<210> 374  
 <211> 744  
 <212> DNA  
 <213> Homo sapiens

<400> 374  
 acggaccgag gggtcgaggg agggacacgg accaggaacc tgagctaggt 50  
 caaagacgcc cgggccaggt gccccgtcgc aggtgcccct ggccggagat 100

gcggtaggag gggcgagcgc gagaagcccc ttctctcggcg ctgccaaacc 150  
 gccaccaccagc ccactggcgaa ccccgggctg gggctgcttc tggcgctggg 200  
 cctgcgcttc ctgctggccc gctggggccg agcctggggg caaatacaga 250  
 ccacttctgc aaatgagaat agcactgttt tgccttcato caccagctcc 300  
 agctccgatg gcaacctcgc tccggaagcc atcactgcta tcatcgtggt 350  
 cttctccctc ttggtgcct tgctcctggc tgtggggctg gcaactgttg 400  
 tgcggaagct tcgggagaag cggcagacgg agggcaccta ccggcccagt 450  
 agcgaggagc agttctccca tgcagccgag gcccgggccc ctcaggactc 500  
 caaggagacg gtgcagggtt gcttgcccat ctaggctccc tctcctgcat 550  
 ctgtctccct tcattgctgt gtgaccttgg ggaaggcag tgcctctct 600  
 gggcagtcag atccaccag tgcttaatag cagggaagaa ggtacttcaa 650  
 agactctgcc cctgaggtca agagaggatg gggctattca cttttatata 700  
 tttatataaa attagtagtg agatgtaaaa aaaaaaaaaa aaaa 744

<210> 375

<211> 123

<212> PRT

<213> Homo sapiens

<400> 375

Met	Ala	Asn	Gly	Leu	Gly	Leu	Leu	Leu	Ala	Leu	Gly	Leu	Pro
1			5					10					15
Phe	Leu	Leu	Ala	Arg	Trp	Gly	Arg	Ala	Trp	Gly	Gln	Ile	Gln
			20					25					30
Thr	Ser	Ala	Asn	Glu	Asn	Ser	Thr	Val	Leu	Pro	Ser	Ser	Thr
			35					40					45
Ser	Ser	Ser	Asp	Gly	Asn	Leu	Arg	Pro	Glu	Ala	Ile	Thr	Ala
			50					55					60
Ile	Val	Val	Phe	Ser	Leu	Leu	Ala	Ala	Leu	Leu	Ala	Val	Gly
			65					70					75
Leu	Ala	Leu	Leu	Val	Arg	Lys	Leu	Arg	Glu	Lys	Arg	Gln	Thr
			80					85					90
Gly	Thr	Tyr	Arg	Pro	Ser	Ser	Glu	Glu	Gln	Phe	Ser	His	Ala
			95					100					105
Glu	Ala	Arg	Ala	Pro	Gln	Asp	Ser	Lys	Glu	Thr	Val	Gln	Gly
			110					115					120

Leu Pro Ile

<210> 376

<211> 713

<212> DNA

<213> Homo sapiens

<400> 376  
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aacatttggg ttttgggatt ttaattttca aacacagcag aatgacattt 100  
tttctgtcac tattattatt gttggatgt gaagctattt ggagatccaa 150  
ttcaggaagc aacacattgg agaatggcta cttctcatca agaaataaag 200  
agaaccacag tcaaccacac caatcatctt tagaagacag tgtgactcct 250  
accaaagctg tcaaaaccac aggcaagggc atagttaaag gacggaatct 300  
tgactcaaga gggtaattc ttggtgctga agcctggggc aggggtgtaa 350  
agaaaaacac ttagattcaa tgattgtaaa ttaaggcaa atacacatat 400  
tagtattacc ttagtgtaat gtatccctgt catatatata ataaggtaa 450  
attataagta cccatgacag ttggctggac agttctaaat tggactttat 500  
taatttttaa aatcagtaac tgatttatca ctggctatgt gcttagatct 550  
acaggagatc atataatttg atacaaataa aagaaaagtg ttctctcccc 600  
ttacagaatt gacattttta atgcgataca gttagaatag gaaatatgac 650  
attagaaagg aagaatgaca gggagaaagg aaagaaggga aaatgttggc 700  
aaggaaaaaa aaa 713

<210> 377

<211> 90

<212> PRT

<213> Homo sapiens

<400> 377

Met	Thr	Phe	Phe	Leu	Ser	Leu	Leu	Leu	Leu	Val	Cys	Glu	Ala
1				5					10				15
Ile	Trp	Arg	Ser	Asn	Ser	Gly	Ser	Asn	Thr	Leu	Glu	Asn	Gly
				20					25				30
Phe	Leu	Ser	Arg	Asn	Lys	Glu	Asn	His	Ser	Gln	Pro	Thr	Gln
				35					40				45
Ser	Leu	Glu	Asp	Ser	Val	Thr	Pro	Thr	Lys	Ala	Val	Lys	Thr
				50					55				60
Gly	Lys	Gly	Ile	Val	Lys	Gly	Arg	Asn	Leu	Asp	Ser	Arg	Gly
				65					70				75
Ile	Leu	Gly	Ala	Glu	Ala	Trp	Gly	Arg	Gly	Val	Lys	Lys	Asn
				80					85				90

<210> 378

<211> 3265

<212> DNA

<213> Homo sapiens

<400> 378

gccaggaata actagagagg aacaatgggg ttattcagag gttttgtttt 50

cctcttagtt ctgtgcctgc tgcaccagtc aaatacttcc ttcattaagc 100  
 tgaataataa tggccttgaa gatattgtca ttgttataga tcctagtgtg 150  
 ccagaagatg aaaaaataat tgaacaaata gaggatatgg tgactacagc 200  
 ttctactgac ctgtttgaag ccacagaaaa aagatttttt tcaaaaaatg 250  
 tatctatatt aattcctgag aattggaagg aaaatcctca gtacaaaagg 300  
 ccaaaacatg aaaaccataa acatgctgat gttatagtgt caccacctac 350  
 actcccaggt agagatgaac catacaccaa gcagttcaca gaatgtggag 400  
 agaaaggcga atacattcac ttcacccctg accttctact tggaaaaaaa 450  
 caaaatgaat atggaccacc aggcaaacgt tttgtccatg agtgggctca 500  
 cctccggtgg ggagtgtttg atgagtacaa tgaagatcag cctttctacc 550  
 gtgctaagtc aaaaaaaatc gaagcaacaa ggtgttccgc aggtatctct 600  
 ggtgaaata gagtttataa gtgtcaagga ggcagctgtc ttagtagagc 650  
 atgcagaatt gattctacaa caaaactgta tggaaaagat tgtcaattct 700  
 ttctgataa agtacaacaa gaaaagcat ccataatgtt tatgcaaatg 750  
 attgattctg ttgttgaaat ttgtaacgaa aaaaccata atcaagaagc 800  
 tccaagccta caaaacataa agtgcaattt tagaagtaca tgggagggtg 850  
 ttagcaattc tgaggatttt aaaaacacca tacccatggt gacaccacct 900  
 cctccacctg tcttctcatt gotgaagatc agtcaaagaa ttgtgtgctt 950  
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 tgaatcaagc agcaaaacat ttctgtctgc agactgttga aaatggatcc 1050  
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 aatccaaata aaaagcagtg atgaaagaaa cacactcatg gcaggattac 1150  
 ctacatatcc tctgggagga acttccatct gctctggaat taaatatgca 1200  
 ttccaggtga ttggagagct acattcccaa ctgatggat ccgaagtact 1250  
 gctgctgact gatggggagg ataacactgc aagttcttgt attgatgaag 1300  
 tgaacaaaag tggggccatt gttcatttta ttgctttggg aagagctgct 1350  
 gatgaagcag taatagagat gagcaagata acaggaggaa gtcattttta 1400  
 tgtttcagat gaagctcaga acaatggcct cattgatgct tttggggctc 1450  
 ttacatcagg aaatactgat ctctcccaga agtccttcca gctcgaaagt 1500  
 aagggattaa cactgaatag taatgcctgy atgaacgaca ctgtcataat 1550  
 tgatagtaca gtgggaaagg acacgttctt tctcatcaca tggaacagtc 1600  
 tgctcccag tatttctctc tgggatccca gtggaacaa atggaaaaat 1650



ttcacagtgg atgcaacttc caaaatggcc tatctcagta ttccaggaac 1700  
 tgcaaagggtg ggcacttggg catacaatct tcaagccaaa gcgaaccocag 1750  
 aaacattaac tattacagta acttctcgag cagcaaatto ttctgtgcct 1800  
 ccaatcacag tgaatgctaa aatgaataag gacgtaaaca gtttccccag 1850  
 cccaatgatt gtttacgcag aaattctaca aggatatgta cctgttcttg 1900  
 gagcaatgt gactgcttc attgaatcac agaattggaca tacagaagtt 1950  
 ttggaacttt tggataatgg tgcaggcgct gattctttca agaattgatg 2000  
 agtctactcc aggtatttta cagcatatac agaaaaatggc agatatagct 2050  
 taaaagttcg ggctcatgga ggagcaaaaca ctgccaggct aaaattacgg 2100  
 cctocactga atagagccgc gtacatacca ggctgggtag tgaacgggga 2150  
 aattgaagca aacccgccaa gacctgaaat tgaatgggat actcagacca 2200  
 ccttgaggga ttccagccga acagcatccg gaggtgcatt tgtggtatca 2250  
 caagtcccaa gccttccctt gcctgaccaa taccacccaa gtcaaatcac 2300  
 agacctgat gccacagttc atgaggataa gattattctt acatggacag 2350  
 caccaggaga taattttgat gttggaaaag ttcaacgtta tatcataaga 2400  
 ataagtgc aa gtattcttga tctaagagac agttttgatg atgctcttca 2450  
 agtaaatact actgatctgt caccaaagga ggccaactcc aaggaagct 2500  
 ttgcatttaa accagaaaat atctcagaag aaaaatgcaac ccacatattt 2550  
 attgccatta aaagtataga taaaagcaat ttgacatcaa aagtatccaa 2600  
 cattgcacaa gtaactttgt ttatccctca agcaaatcct gatgacattg 2650  
 atcctacacc tactcctact cctactccta ctcttgataa aagtcataat 2700  
 tctggagtta atatttttac gctggtattg tctgtgattg ggtctgttgt 2750  
 aattgttaac ttatttttaa gtaccaccat ttgaacctta acgaagaaaa 2800  
 aaatcttcaa gtacacctag aagagagttt taaaaaacaa aacaatgtaa 2850  
 gtaaggataa tttctgaatc ttaaaattca tccatgtgt gatcataaac 2900  
 tcataaaaat aattttaaga tgtoggaaaa ggatactttg attaaataaa 2950  
 aacactcatg gatattgtaa aactgtcaag attaaaattt aatagtttca 3000  
 tttatttgtt attttatttg taagaaatag tgaatgaaca agatcctttt 3050  
 tcatactgat acctggtgt atattatttg atgcaacagt tttctgaaat 3100  
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<210> 379

<211> 919

<212> PRT

<213> Homo sapiens

<400> 379

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Leu	His	Gln	Ser	Asn	Thr	Ser	Phe	Ile	Lys	Leu	Asn	Asn	Asn	Gly
				20					25					30
Phe	Glu	Asp	Ile	Val	Ile	Val	Ile	Asp	Pro	Ser	Val	Pro	Glu	Asp
				35					40					45
Glu	Lys	Ile	Ile	Glu	Gln	Ile	Glu	Asp	Met	Val	Thr	Thr	Ala	Ser
				50					55					60
Thr	Tyr	Leu	Phe	Glu	Ala	Thr	Glu	Lys	Arg	Phe	Phe	Phe	Lys	Asn
				65					70					75
Val	Ser	Ile	Leu	Ile	Pro	Glu	Asn	Trp	Lys	Glu	Asn	Pro	Gln	Tyr
				80					85					90
Lys	Arg	Pro	Lys	His	Glu	Asn	His	Lys	His	Ala	Asp	Val	Ile	Val
				95					100					105
Ala	Pro	Pro	Thr	Leu	Pro	Gly	Arg	Asp	Glu	Pro	Tyr	Thr	Lys	Gln
				110					115					120
Phe	Thr	Glu	Cys	Gly	Glu	Lys	Gly	Glu	Tyr	Ile	His	Phe	Thr	Pro
				125					130					135
Asp	Leu	Leu	Leu	Gly	Lys	Lys	Gln	Asn	Glu	Tyr	Gly	Pro	Pro	Gly
				140					145					150
Lys	Leu	Phe	Val	His	Glu	Trp	Ala	His	Leu	Arg	Trp	Gly	Val	Phe
				155					160					165
Asp	Glu	Tyr	Asn	Glu	Asp	Gln	Pro	Phe	Tyr	Arg	Ala	Lys	Ser	Lys
				170					175					180
Lys	Ile	Glu	Ala	Thr	Arg	Cys	Ser	Ala	Gly	Ile	Ser	Gly	Arg	Asn
				185					190					195
Arg	Val	Tyr	Lys	Cys	Gln	Gly	Gly	Ser	Cys	Leu	Ser	Arg	Ala	Cys
				200					205					210
Arg	Ile	Asp	Ser	Thr	Thr	Lys	Leu	Tyr	Gly	Lys	Asp	Cys	Gln	Phe
				215					220					225
Phe	Pro	Asp	Lys	Val	Gln	Thr	Glu	Lys	Ala	Ser	Ile	Met	Phe	Met
				230					235					240
Gln	Ser	Ile	Asp	Ser	Val	Val	Glu	Phe	Cys	Asn	Glu	Lys	Thr	His
				245					250					255
Asn	Gln	Glu	Ala	Pro	Ser	Leu	Gln	Asn	Ile	Lys	Cys	Asn	Phe	Arg
				260					265					270
Ser	Thr	Trp	Glu	Val	Ile	Ser	Asn	Ser	Glu	Asp	Phe	Lys	Asn	Thr

275	280	285
Ile Pro Met Val Thr Pro Pro Pro Pro Pro Val Phe Ser Leu Leu		
290	295	300
Lys Ile Ser Gln Arg Ile Val Cys Leu Val Leu Asp Lys Ser Gly		
305	310	315
Ser Met Gly Gly Lys Asp Arg Leu Asn Arg Met Asn Gln Ala Ala		
320	325	330
Lys His Phe Leu Leu Gln Thr Val Glu Asn Gly Ser Trp Val Gly		
335	340	345
Met Val His Phe Asp Ser Thr Ala Thr Ile Val Asn Lys Leu Ile		
350	355	360
Gln Ile Lys Ser Ser Asp Glu Arg Asn Thr Leu Met Ala Gly Leu		
365	370	375
Pro Thr Tyr Pro Leu Gly Gly Thr Ser Ile Cys Ser Gly Ile Lys		
380	385	390
Tyr Ala Phe Gln Val Ile Gly Glu Leu His Ser Gln Leu Asp Gly		
395	400	405
Ser Glu Val Leu Leu Leu Thr Asp Gly Glu Asp Asn Thr Ala Ser		
410	415	420
Ser Cys Ile Asp Glu Val Lys Gln Ser Gly Ala Ile Val His Phe		
425	430	435
Ile Ala Leu Gly Arg Ala Ala Asp Glu Ala Val Ile Glu Met Ser		
440	445	450
Lys Ile Thr Gly Gly Ser His Phe Tyr Val Ser Asp Glu Ala Gln		
455	460	465
Asn Asn Gly Leu Ile Asp Ala Phe Gly Ala Leu Thr Ser Gly Asn		
470	475	480
Thr Asp Leu Ser Gln Lys Ser Leu Gln Leu Glu Ser Lys Gly Leu		
485	490	495
Thr Leu Asn Ser Asn Ala Trp Met Asn Asp Thr Val Ile Ile Asp		
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Ser Thr Val Gly Lys Asp Thr Phe Phe Leu Ile Thr Trp Asn Ser		
515	520	525
Leu Pro Pro Ser Ile Ser Leu Trp Asp Pro Ser Gly Thr Ile Met		
530	535	540
Glu Asn Phe Thr Val Asp Ala Thr Ser Lys Met Ala Tyr Leu Ser		
545	550	555
Ile Pro Gly Thr Ala Lys Val Gly Thr Trp Ala Tyr Asn Leu Gln		
560	565	570
Ala Lys Ala Asn Pro Glu Thr Leu Thr Ile Thr Val Thr Ser Arg		
575	580	585
Ala Ala Asn Ser Ser Val Pro Pro Ile Thr Val Asn Ala Lys Met		

Asn Lys Asp Val	590	Asn Ser Phe Pro Ser	595	Pro Met Ile Val Tyr	600
605		610		615	
Glu Ile Leu Gln	Gly Tyr Val Pro Val	Leu Gly Ala Asn Val Thr			
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Ala Phe Ile Glu	Ser Gln Asn Gly His	Thr Glu Val Leu Glu Leu			
635		640		645	
Leu Asp Asn Gly	Ala Gly Ala Asp Ser	Phe Lys Asn Asp Gly Val			
650		655		660	
Tyr Ser Arg Tyr	Phe Thr Ala Tyr Thr	Glu Asn Gly Arg Tyr Ser			
665		670		675	
Leu Lys Val Arg	Ala His Gly Gly Ala	Asn Thr Ala Arg Leu Lys			
680		685		690	
Leu Arg Pro Pro	Leu Asn Arg Ala Ala	Tyr Ile Pro Gly Trp Val			
695		700		705	
Val Asn Gly Glu	Ile Glu Ala Asn Pro	Pro Arg Pro Glu Ile Asp			
710		715		720	
Glu Asp Thr Gln	Thr Thr Leu Glu Asp	Phe Ser Arg Thr Ala Ser			
725		730		735	
Gly Gly Ala Phe	Val Val Ser Gln Val	Pro Ser Leu Pro Leu Pro			
740		745		750	
Asp Gln Tyr Pro	Pro Ser Gln Ile Thr	Asp Leu Asp Ala Thr Val			
755		760		765	
His Glu Asp Lys	Ile Ile Leu Thr Trp	Thr Ala Pro Gly Asp Asn			
770		775		780	
Phe Asp Val Gly	Lys Val Gln Arg Tyr	Ile Ile Arg Ile Ser Ala			
785		790		795	
Ser Ile Leu Asp	Leu Arg Asp Ser Phe	Asp Asp Ala Leu Gln Val			
800		805		810	
Asn Thr Thr Asp	Leu Ser Pro Lys Glu	Ala Asn Ser Lys Glu Ser			
815		820		825	
Phe Ala Phe Lys	Pro Glu Asn Ile Ser	Glu Glu Asn Ala Thr His			
830		835		840	
Ile Phe Ile Ala	Ile Lys Ser Ile Asp	Lys Ser Asn Leu Thr Ser			
845		850		855	
Lys Val Ser Asn	Ile Ala Gln Val Thr	Leu Phe Ile Pro Gln Ala			
860		865		870	
Asn Pro Asp Asp	Ile Asp Pro Thr Pro	Thr Pro Thr Pro Thr Pro			
875		880		885	
Thr Pro Asp Lys	Ser His Asn Ser Gly	Val Asn Ile Ser Thr Leu			
890		895		900	
Val Leu Ser Val	Ile Gly Ser Val Val	Ile Val Asn Phe Ile Leu			

Ser Thr Thr Ile

<210> 380  
 <211> 3877  
 <212> DNA  
 <213> Homo sapiens

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 gccattgaat cagccttgga gaccctgaac aatcctgcag agaacagccc 1250  
 caatcacctg cttacacgg cctctgattt catagaaggg atctacggaa 1300

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 <211> 532  
 <212> PRT  
 <213> Homo sapiens

<400> 381  
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 Met Leu Ala Cys Thr Pro Lys Gly Asp Glu Glu Gln Leu Ala Leu  
 35 40 45  
 Pro Arg Ala Asn Ser Pro Thr Gly Lys Glu Gly Tyr Gln Ala Val  
 50 55 60  
 Leu Gln Glu Trp Glu Glu Gln His Arg Asn Tyr Val Ser Ser Leu  
 65 70 75  
 Lys Arg Gln Ile Ala Gln Leu Lys Glu Glu Leu Gln Glu Arg Ser  
 80 85 90

Glu	Gln	Leu	Arg	Asn	Gly	Gln	Tyr	Gln	Ala	Ser	Asp	Ala	Ala	Gly	
				95					100					105	
Leu	Gly	Leu	Asp	Arg	Ser	Pro	Pro	Glu	Lys	Thr	Gln	Ala	Asp	Leu	
				110					115					120	
Leu	Ala	Phe	Leu	His	Ser	Gln	Val	Asp	Lys	Ala	Glu	Val	Asn	Ala	
				125					130					135	
Gly	Val	Lys	Leu	Ala	Thr	Glu	Tyr	Ala	Ala	Val	Pro	Phe	Asp	Ser	
				140					145					150	
Phe	Thr	Leu	Gln	Lys	Val	Tyr	Gln	Leu	Glu	Thr	Gly	Leu	Thr	Arg	
				155					160					165	
His	Pro	Glu	Glu	Lys	Pro	Val	Arg	Lys	Asp	Lys	Arg	Asp	Glu	Leu	
				170					175					180	
Val	Glu	Ala	Ile	Glu	Ser	Ala	Leu	Glu	Thr	Leu	Asn	Asn	Pro	Ala	
				185					190					195	
Glu	Asn	Ser	Pro	Asn	His	Arg	Pro	Tyr	Thr	Ala	Ser	Asp	Phe	Ile	
				200					205					210	
Glu	Gly	Ile	Tyr	Arg	Thr	Glu	Arg	Asp	Lys	Gly	Thr	Leu	Tyr	Glu	
				215					220					225	
Leu	Thr	Phe	Lys	Gly	Asp	His	Lys	His	Glu	Phe	Lys	Arg	Leu	Ile	
				230					235					240	
Leu	Phe	Arg	Pro	Phe	Ser	Pro	Ile	Met	Lys	Val	Lys	Asn	Glu	Lys	
				245					250					255	
Leu	Asn	Met	Ala	Asn	Thr	Leu	Ile	Asn	Val	Ile	Val	Pro	Leu	Ala	
				260					265					270	
Lys	Arg	Val	Asp	Lys	Phe	Arg	Gln	Phe	Met	Gln	Asn	Phe	Arg	Glu	
				275					280					285	
Met	Cys	Ile	Glu	Gln	Asp	Gly	Arg	Val	His	Leu	Thr	Val	Val	Tyr	
				290					295					300	
Phe	Gly	Lys	Glu	Glu	Ile	Asn	Glu	Val	Lys	Gly	Ile	Leu	Glu	Asn	
				305					310					315	
Thr	Ser	Lys	Ala	Ala	Asn	Phe	Arg	Asn	Phe	Thr	Phe	Ile	Gln	Leu	
				320					325					330	
Asn	Gly	Glu	Phe	Ser	Arg	Gly	Lys	Gly	Leu	Asp	Val	Gly	Ala	Arg	
				335					340					345	
Phe	Trp	Lys	Gly	Ser	Asn	Val	Leu	Leu	Phe	Phe	Cys	Asp	Val	Asp	
				350					355					360	
Ile	Tyr	Phe	Thr	Ser	Glu	Phe	Leu	Asn	Thr	Cys	Arg	Leu	Asn	Thr	
				365					370					375	
Gln	Pro	Gly	Lys	Lys	Val	Phe	Tyr	Pro	Val	Leu	Phe	Ser	Gln	Tyr	
				380					385					390	
Asn	Pro	Gly	Ile	Ile	Tyr	Gly	His	His	Asp	Ala	Val	Pro	Pro	Leu	
				395					400					405	



Glu	Gln	Gln	Leu	Val	Ile	Lys	Lys	Glu	Thr	Gly	Phe	Trp	Arg	Asp
				410						415				420
Phe	Gly	Phe	Gly	Met	Thr	Cys	Gln	Tyr	Arg	Ser	Asp	Phe	Ile	Asn
				425						430				435
Ile	Gly	Gly	Phe	Asp	Leu	Asp	Ile	Lys	Gly	Trp	Gly	Gly	Glu	Asp
				440						445				450
Val	His	Leu	Tyr	Arg	Lys	Tyr	Leu	His	Ser	Asn	Leu	Ile	Val	Val
				455						460				465
Arg	Thr	Pro	Val	Arg	Gly	Leu	Phe	His	Leu	Trp	His	Glu	Lys	Arg
				470						475				480
Cys	Met	Asp	Glu	Leu	Thr	Pro	Glu	Gln	Tyr	Lys	Met	Cys	Met	Gln
				485						490				495
Ser	Lys	Ala	Met	Asn	Glu	Ala	Ser	His	Gly	Gln	Leu	Gly	Met	Leu
				500						505				510
Val	Phe	Arg	His	Glu	Ile	Glu	Ala	His	Leu	Arg	Lys	Gln	Lys	Gln
				515						520				525
Lys	Thr	Ser	Ser	Lys	Lys	Thr								
				530										

<210> 382

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 382

ctcggggaaa gggacttgat gttgg 25

<210> 383

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 383

gcgaaggtga gcctctatct cgtgcc 26

<210> 384

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 384

cagcctacac gtattgagg 19

<210> 385

<211> 48

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 385

gagtcagttac aatcctggca taatatacgg ccacatgat gcagttccc 48

<210> 386

<211> 1346

<212> DNA

<213> Homo sapiens

<400> 386

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gaacagctct gggagataaa gcatatgcct gggataccaa tgaagaatac 150  
ctcttcaaag cgatggtagc ttttccatg agaaaagtgc ccaacagaga 200  
agcaacagaa atttcccatg tcctactttg caatgtaacc cagagggtat 250  
cattctggtt tgtggttaca gacccttcaa aaaatcacac ccttctgct 300  
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gttgattata ttttttctg atatcagccc ctaataggac aattctattt 1250

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 <211> 212  
 <212> PRT  
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 Ile Arg Thr Ala Leu Gly Asp Lys Ala Tyr Ala Trp Asp Thr Asn  
 35 40 45  
 Glu Glu Tyr Leu Phe Lys Ala Met Val Ala Phe Ser Met Arg Lys  
 50 55 60  
 Val Pro Asn Arg Glu Ala Thr Glu Ile Ser His Val Leu Leu Cys  
 65 70 75  
 Asn Val Thr Gln Arg Val Ser Phe Trp Phe Val Val Thr Asp Pro  
 80 85 90  
 Ser Lys Asn His Thr Leu Pro Ala Val Glu Val Gln Ser Ala Ile  
 95 100 105  
 Arg Met Asn Lys Asn Arg Ile Asn Asn Ala Phe Phe Leu Asn Asp  
 110 115 120  
 Gln Thr Leu Glu Phe Leu Lys Ile Pro Ser Thr Leu Ala Pro Pro  
 125 130 135  
 Met Asp Pro Ser Val Pro Ile Trp Ile Ile Ile Phe Gly Val Ile  
 140 145 150  
 Phe Cys Ile Ile Ile Val Ala Ile Ala Leu Leu Ile Leu Ser Gly  
 155 160 165  
 Ile Trp Gln Arg Arg Arg Lys Asn Lys Glu Pro Ser Glu Val Asp  
 170 175 180  
 Asp Ala Glu Asp Lys Cys Glu Asn Met Ile Thr Ile Glu Asn Gly  
 185 190 195  
 Ile Pro Ser Asp Pro Leu Asp Met Lys Gly Gly Ile Leu Met Met  
 200 205 210  
 Pro Ser

<210> 388  
 <211> 1371  
 <212> DNA  
 <213> Homo sapiens

<400> 388  
 aactcaaact cctctctctg ggaaaacgcg gtgcttgctc ctcccggagt 50

ggcccttgga ggggtgttga gccctcggtc tgccccgtcc ggtctctggg 100  
 gccaaaggctg ggtttccctc atgtatggca agagctctac tcgtcgcggtg 150  
 cttctctctcc ttggcataca gctcacagct ctttgcccta tagcagctgt 200  
 ggaaatttat acctcccggtg tgcgtggaggc tggttaattggg acagatgctc 250  
 ggttaaaatg cactttctcc agctttgccc ctgtgggtga tgctctaaca 300  
 gtgacctgga attttcgtcc tctagacggg ggacctgagc agtttgtatt 350  
 ctactaccac atagatccct tccaaccatc gagtggcggtg ttttaaggacc 400  
 ggggtgtcttg ggaagggaat cctgagcggc acgatgcctc catcctcttc 450  
 tggaaactgc agttcgacga caatgggaca tacacctgcc aggtgaagaa 500  
 cccacctgat gttgatgggg tgatagggga gatccggctc agcgtcgtgc 550  
 acactgtacg cttctctgag atccacttcc tggctctggc cattggctct 600  
 gcctgtgcac tgatgatcat aatagtaatt gtagtggtcc tcttcacaga 650  
 ttaccggaaa aagcgatggg ccgaaagagc tcataaagtg gtggagataa 700  
 aatcaaaaaga agaggaaagg ctcaaccaag agaaaaaggt cctctgttat 750  
 ttagaagaca cagactaaca atttttagatg gaagctgaga tgatttccaa 800  
 gaacaagaac cctagtattt cttgaagtta atggaaaactt ttctttggct 850  
 ttccagttg tgaccggttt tccaaccagt tctgcagcat attagattct 900  
 agacaagcaa caccctctg gagccagcac agtgctcctc catatcacca 950  
 gtcatacaca gccctattat taaggtctta ttttaattca gagtgtaaat 1000  
 tttttcaagt gctcattagg ttttataaac aagaagctac atttttggcc 1050  
 ttaagacct acttacagtg ttatgacttg tatacacata tattggtatc 1100  
 aaaggggata aaagccaatt tgtctgttac atttcccttc acgtatttct 1150  
 ttttagacga cttctgtac taaagttaat gtgtttactc totttccctc 1200  
 ccacattctc aattaaaagg tgagctaagc ctccctgggtg tttctgatta 1250  
 acagtaaatc ctaaatcaaa actgttaaat gacattttta tttttatgtc 1300  
 tctccttaac tatgagacac atcttgtttt actgaatttc tttcaattat 1350  
 ccaggtgata gatttttgtc g 1371

<210> 389  
 <211> 215  
 <212> PRT  
 <213> Homo sapiens

<400> 389  
 Met Tyr Gly Lys Ser Ser Thr Arg Ala Val Leu Leu Leu Gly  
 1 5 10 15

Ile	Gln	Leu	Thr	Ala	Leu	Trp	Pro	Ile	Ala	Ala	Val	Glu	Ile	Tyr	
				20					25					30	
Thr	Ser	Arg	Val	Leu	Glu	Ala	Val	Asn	Gly	Thr	Asp	Ala	Arg	Leu	
				35					40					45	
Lys	Cys	Thr	Phe	Ser	Ser	Phe	Ala	Pro	Val	Gly	Asp	Ala	Leu	Thr	
				50					55					60	
Val	Thr	Trp	Asn	Phe	Arg	Pro	Leu	Asp	Gly	Gly	Pro	Glu	Gln	Phe	
				65					70					75	
Val	Phe	Tyr	Tyr	His	Ile	Asp	Pro	Phe	Gln	Pro	Met	Ser	Gly	Arg	
				80					85					90	
Phe	Lys	Asp	Arg	Val	Ser	Trp	Asp	Gly	Asn	Pro	Glu	Arg	Tyr	Asp	
				95					100					105	
Ala	Ser	Ile	Leu	Leu	Trp	Lys	Leu	Gln	Phe	Asp	Asp	Asn	Gly	Thr	
				110					115					120	
Tyr	Thr	Cys	Gln	Val	Lys	Asn	Pro	Pro	Asp	Val	Asp	Gly	Val	Ile	
				125					130					135	
Gly	Glu	Ile	Arg	Leu	Ser	Val	Val	His	Thr	Val	Arg	Phe	Ser	Glu	
				140					145					150	
Ile	His	Phe	Leu	Ala	Leu	Ala	Ile	Gly	Ser	Ala	Cys	Ala	Leu	Met	
				155					160					165	
Ile	Ile	Ile	Val	Ile	Val	Val	Val	Leu	Phe	Gln	His	Tyr	Arg	Lys	
				170					175					180	
Lys	Arg	Trp	Ala	Glu	Arg	Ala	His	Lys	Val	Val	Glu	Ile	Lys	Ser	
				185					190					195	
Lys	Glu	Glu	Glu	Arg	Leu	Asn	Gln	Glu	Lys	Lys	Val	Ser	Val	Tyr	
				200					205					210	
Leu	Glu	Asp	Thr	Asp											
				215											

<210> 390

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 390

ccgaggccat ctgagggcca gagg 24

<210> 391

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 391

acaggcagag ccaatggcca gagg 24

<210> 392  
 <211> 45  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 392  
 gagaggactg cgggagtttg ggacctttgt gcagacgtgc tcatg 45

<210> 393  
 <211> 471  
 <212> DNA  
 <213> Homo sapiens

<400> 393  
 gcatttttgt ctgtgctccc tgatcttcag gtcaccacca tgaagttctt 50  
 agcagtcctg gtactcttgg gagtttccat cttctggtc tctgcccaga 100  
 atccgacaac agctgctcca gctgacacgt atccagctac tggctctgct 150  
 gatgatgaag ccctgatgac tgaaccact gctgctgcaa ccaactgogac 200  
 cactgctgct cctaccactg caaccaccgc tgcttctacc actgctcgta 250  
 aagacattcc agttttacc aaatgggttg gggatctccc gaatggtaga 300  
 gtgtgtccct gagatggaat cagcttgagt cttctgcaat tggtcacaa 350  
 tattcatgct tcctgtgatt tcatccaact acttaccttg cctacgata 400  
 cccctttatc tctaatcagt ttattttctt tcaataaaaa aataactatg 450  
 agcaacataa aaaaaaaaaa a 471

<210> 394  
 <211> 90  
 <212> PRT  
 <213> Homo sapiens

<400> 394  
 Met Lys Phe Leu Ala Val Leu Val Leu Gly Val Ser Ile Phe  
 1 5 10  
 Leu Val Ser Ala Gln Asn Pro Thr Thr Ala Ala Pro Ala Asp Thr  
 20 25 30  
 Tyr Pro Ala Thr Gly Pro Ala Asp Asp Glu Ala Pro Asp Ala Glu  
 35 40 45  
 Thr Thr Ala Ala Thr Thr Thr Thr Thr Ala Ala Pro Thr Thr  
 50 55 60  
 Ala Thr Thr Ala Ala Ser Thr Thr Ala Arg Lys Asp Ile Pro Val  
 65 70 75  
 Leu Pro Lys Trp Val Gly Asp Leu Pro Asn Gly Arg Val Cys Pro  
 80 85 90

<210> 395  
 <211> 25

<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 395  
gctccctgat cttcatgtca ccacc 25

<210> 396  
<211> 26  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 396  
cagggacaca ctctaccatt cgagg 26

<210> 397  
<211> 42  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 397  
ccatctttct ggtctctgcc cagaatccga caacagctgc to 42

<210> 398  
<211> 907  
<212> DNA  
<213> Homo sapiens

<400> 398  
ggactctgaa ggtccaagc agctgctgag gcccccaagg aagtgggtcc 50  
aaccttgga cctaggggt ctggatttgc tggttaacaa gataacctga 100  
gggcaggacc ccatagggga atgctacctc ctgcccttcc acctgccctg 150  
gtgttcacgg tggcctggtc cctccttgcc gagagagtgt cctgggtcag 200  
ggacgcagag gacgctcaca gactccagcc ctttgttacc gagaggacac 250  
ttggcaaggt ccagcgatgg tccggagtcc acacacagac tggcggcagg 300  
gcaggagggg gacagttctg ttgtgcttgg ttggacagta agagggtctt 350  
ggccagtcca ggggtggggg cggaactc cataaagaac cagagggtct 400  
gggccccgcg cacagagtca tctgccagc tcctctgctg ctggccagtg 450  
ggagtggcac gagtggggc tttgtgccag taaaccaca ggctggattt 500  
gcctgcgggc catggtccct gtctagggca gcaattctca accttcttgc 550  
tctcaggacc ccaaagagct ttcattgtat ctattgattt ttaccacatt 600  
agcaattaa actgagaaat gggccgggca cggtgggtca cgcctgtaat 650

cccagcactt tgggaggccg aggcgggtg atcacctgag atcaggagtt 700  
 caagaccagc ctggccaaca tgggtgaaacc ttgtctacta aaaatacaaa 750  
 aaattagcca ggcacagtgg tgtgcactgg tagtcccagt tactcgggag 800  
 gctgaggcag gaaaatcgct tgaaccagg aggcgggaagt tgcggtgagc 850  
 cgagatcgcg ccgctgattc cagcctgggc gacaagagtg agactccatc 900  
 tcacaca 907

<210> 399  
 <211> 120  
 <212> PRT  
 <213> Homo sapiens

<400> 399  
 Met Leu Pro Pro Ala Leu Pro Pro Ala Leu Val Phe Thr Val Ala  
 1 5 10 15  
 Trp Ser Leu Leu Ala Glu Arg Val Ser Trp Val Arg Asp Ala Glu  
 20 25 30  
 Asp Ala His Arg Leu Gln Pro Phe Val Thr Glu Arg Thr Leu Gly  
 35 40 45  
 Lys Val Gln Arg Trp Ser Gly Val His Thr Gln Thr Gly Gly Arg  
 50 55 60  
 Ala Gly Gly Gly Gln Phe Cys Cys Ala Trp Leu Asp Ser Lys Arg  
 65 70 75  
 Val Leu Ala Ser Pro Gly Trp Gly Ala Ala Asn Ser Ile Lys Asn  
 80 85 90  
 Gln Arg Val Trp Ala Pro Ala Thr Glu Ser Ser Ala Gln Leu Leu  
 95 100 105  
 Cys Cys Trp Pro Val Gly Val Ala Arg Gly Gly Ala Leu Cys Gln  
 110 115 120

<210> 400  
 <211> 893  
 <212> DNA  
 <213> Homo sapiens

<400> 400  
 gtcattgccag tgcctgtctt gtgcctgctc tgggccttgg caatggtgac 50  
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 aggagctgac cctgtctctt catgggaccc tgcagctggg ccaggccctc 150  
 aacggtgtgt acaggaccac ggagggaagg ctgacaaagg ccaggaacag 200  
 cctgggtctc tatggccgca caatagaact cctggggcag gaggtcagcc 250  
 ggggccggga tgcagcccag gaacttcggg caagcctgtt ggagactcag 300  
 atggaggagg atattctgca gctgcaggca gaggccacag ctgagggtgt 350  
 gggggagggt gccaggcac agaaggtgt acgggacagc gtgcagcggc 400



tagaagtcca gctgaggagc gcctggctgg gccctgccta cggagaattt 450  
 gaggtcttaa aggctcacgc tgacaagcag agccacatcc tatgggacct 500  
 cacaggccac gtgcagcggc agaggcggga gatggtggca cagcagcatc 550  
 ggctgcgaca gatccaggag agactccaca cagcggcgct cccagcctga 600  
 atctgcctgg atggaactga ggaccaatca tgctgcaagg aacacttcca 650  
 cgccccgtga ggccctgtg caggaggagg ctgcctgttc actgggatac 700  
 gccagggcgc cgggcccac ttctgagcac agagcagaga cagacgcagg 750  
 cggggacaaa ggcagaggat gtgccccat tggggagggg tggaggaagg 800  
 acatgtacc ttctatgct acacacccct cattaagca gagtcgtggc 850  
 atttcaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaa 893

<210> 401  
 <211> 198  
 <212> PRT  
 <213> Homo sapiens

<400> 401  
 Met Pro Val Pro Ala Leu Cys Leu Leu Trp Ala Leu Ala Met Val 15  
 1 5 10  
 Thr Arg Pro Ala Ser Ala Ala Pro Met Gly Gly Pro Glu Leu Ala 30  
 20 25  
 Gln His Glu Glu Leu Thr Leu Leu Phe His Gly Thr Leu Gln Leu 45  
 35 40  
 Gly Gln Ala Leu Asn Gly Val Tyr Arg Thr Thr Glu Gly Arg Leu 60  
 50 55  
 Thr Lys Ala Arg Asn Ser Leu Gly Leu Tyr Gly Arg Thr Ile Glu 75  
 65 70  
 Leu Leu Gly Gln Glu Val Ser Arg Gly Arg Asp Ala Ala Gln Glu 90  
 80 85  
 Leu Arg Ala Ser Leu Leu Glu Thr Gln Met Glu Glu Asp Ile Leu 105  
 95 100  
 Gln Leu Gln Ala Glu Ala Thr Ala Glu Val Leu Gly Glu Val Ala 120  
 110 115  
 Gln Ala Gln Lys Val Leu Arg Asp Ser Val Gln Arg Leu Glu Val 135  
 125 130  
 Gln Leu Arg Ser Ala Trp Leu Gly Pro Ala Tyr Arg Glu Phe Glu 150  
 140 145  
 Val Leu Lys Ala His Ala Asp Lys Gln Ser His Ile Leu Trp Ala 165  
 155 160  
 Leu Thr Gly His Val Gln Arg Gln Arg Arg Glu Met Val Ala Gln 180  
 170 175  
 Gln His Arg Leu Arg Gln Ile Gln Glu Arg Leu His Thr Ala Ala

Leu Pro Ala

<210> 402  
 <211> 1915  
 <212> DNA  
 <213> Homo sapiens

<400> 402  
 ggcaacatgg ctcagcaggc ttgcccaga gccatggcaa agaattggact 50  
 tgtaatattgc atcctggtga tcaccttact cctggaccag accaccagcc 100  
 acacatccag attaaaaagc aggaagcaca gcaaacgtcg agtgagagac 150  
 aaggatggag atctgaagac tcaaatgaa aagctctgga cagaagtcga 200  
 tgccttgaag gaaattcaag cctgcagac agtctgtctc cgaggcacta 250  
 aagttcaca gaaatgtac cttgcttcag aaggtttgaa gcatttccat 300  
 gaggccaatg aagactgcat ttccaaagga ggaatcctgg ttatccccag 350  
 gaactccgac gaaatcaacg ccctccaaga ctatggtaaa aggagcctcg 400  
 caggtgtcaa tgacttttgg ctgggcatca atgacatggt cacggaagcg 450  
 aagtttgttg acgtcaacgg aatcgctatc tccttccctca actgggacgg 500  
 tgcacagcct aacggtggca agcgagaaaa ctgtgtcctg ttctcccaat 550  
 cagctcaggg caagtggagt gatgaggcct gtcgcagcag caagagatac 600  
 atatgcgagt tcacatccc taaataggtc tttctccaat gtgtcctcca 650  
 agcaagattc atcataactt ataggttcat gatctctaag atcaagtaaa 700  
 aatcataatt tttacttatt aaaaaattgc aacacaagat caatgtccat 750  
 agcaatatga tagcatcagc caattttgct aacacatttc tttgggattt 800  
 tgcccttcct ggggtatagg ggaacagaaa tattgatcca tgtgcacgca 850  
 gataaaatgg cttctgctaa acagactaaa atctttctct ctagtcttcc 900  
 tcacttgtac aaacccagtt tgttttcaaa aaatcacagt agcaatgcaa 950  
 ctcatcactc tagaaaagca agcttaggct acctgaaaga ttttcccttg 1000  
 gaagtttagc gtatgttga ctaacaaaaa ttccctacat cagagactct 1050  
 aggtgtcata taatccaaaa acttttcagc ctgttgctca tctgtccca 1100  
 tgcgtggaat aataccttgt cagcccatla ccttattttt gaattgctcc 1150  
 atctcctggt gggacttgta tcttctctgc catatcagaa cacaaacccc 1200  
 tgaagagggt ctgatttgat tttttttttt tcttcatgcc tacccttttt 1250  
 ttggaagttt ccagccgcaa tttgaaatga aatgacaagg tgtatatattg 1300

atcaattttc attoccacca ttgcattaca acctctaact taaatgggta 1350  
 accctaaggc atatacaaga agcagattgc atgataaacg gaaatagaaa 1400  
 aaaaagaacct acattttatt tgcttttagca tctttactct caccttttat 1450  
 gagattgaga gtggacttac atttcctttt ttacattttc gtatatttat 1500  
 ttttttttagc catcattata tgtttaagtc tattatgggc aaccaatctt 1550  
 tgggaagctga aaactgaatt taaagaatgc tatcttggaa aattgcatac 1600  
 gtctgtgcaa ttttttattc tgcttagtgc tattctgctt gttaactag 1650  
 attgtacaaa ataacttcac tgcttaatat caaattacaa agtttagact 1700  
 tggaggggaaa tgggcttttt agaagcaaac aattttaaat atattttgtt 1750  
 cttcaataaa atagtgttta aacattgaat gtgtttgtg aacaatatcc 1800  
 cactttgcaa actttaacta cacatgcttg gaattaagtt ttagctgttt 1850  
 tcattgtctc ataataaagc ctgaattctg atcaataaaa aaaaaaaaaa 1900  
 aaaaaaaaaa aaaaa 1915

<210> 403  
 <211> 206  
 <212> PRT  
 <213> Homo sapiens

<400> 403  
 Met Ala Gln Gln Ala Cys Pro Arg Ala Met Ala Lys Asn Gly Leu  
 1 5 10 15  
 Val Ile Cys Ile Leu Val Ile Thr Leu Leu Asp Gln Thr Thr  
 20 25 30  
 Ser His Thr Ser Arg Leu Lys Ala Arg Lys His Ser Lys Arg Arg  
 35 40 45  
 Val Arg Asp Lys Asp Gly Asp Leu Lys Thr Gln Ile Glu Lys Leu  
 50 55 60  
 Trp Thr Glu Val Asn Ala Leu Lys Glu Ile Gln Ala Leu Gln Thr  
 65 70 75  
 Val Cys Leu Arg Gly Thr Lys Val His Lys Lys Cys Tyr Leu Ala  
 80 85 90  
 Ser Glu Gly Leu Lys His Phe His Glu Ala Asn Glu Asp Cys Ile  
 95 100 105  
 Ser Lys Gly Gly Ile Leu Val Ile Pro Arg Asn Ser Asp Glu Ile  
 110 115 120  
 Asn Ala Leu Gln Asp Tyr Gly Lys Arg Ser Leu Pro Gly Val Asn  
 125 130 135  
 Asp Phe Trp Leu Gly Ile Asn Asp Met Val Thr Glu Gly Lys Phe  
 140 145 150  
 Val Asp Val Asn Gly Ile Ala Ile Ser Phe Leu Asn Trp Asp Arg

	155		160		165
Ala	Gln	Pro	Asn	Gly	Gly
				Lys	Arg
				Glu	Asn
				Cys	Val
				Leu	Phe
				Ser	
					180
Gln	Ser	Ala	Gln	Gly	Lys
				Trp	Ser
				Asp	Glu
				Ala	Cys
				Arg	Ser
					195
Lys	Arg	Tyr	Ile	Cys	Glu
				Phe	Thr
				Ile	Pro
				Lys	
					205

<210> 404

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 404

cctggttatc cccaggaact cogac 25

<210> 405

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 405

ctcttgctgc tgcgacaggc ctc 23

<210> 406

<211> 46

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 406

cgccctccaa gactatgcta aaagagcct gccagggtgc aatgac 46

<210> 407

<211> 570

<212> DNA

<213> Homo sapiens

<400> 407

gcgaggaccg ggtataagaa gctcgtggc cttgccggg cagccgcagg 50

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tgcgccaagc ctgtggccca gcctgtcgct gcgctggagt cggcggcgga 200

ggcggggggc gggaccctgg ccaacccctc cggcaccctc aaccgcgtga 250

agctcctgct gagcagcctg ggcatccccg tgaaccacct catagagggc 300

tcccagaagt gtgtggctga gctgggtccc caggccgtgg gggccgtgaa 350

ggccctgaag gccctgctgg gggccctgac agtgtttggc tgagccgaga 400  
 ctggagcatc tacacctgag gacaagacgc tgcccacccg cgagggctga 450  
 aaaccccgcc gcggggagga ccgtccatcc ccttcccccg gccctctca 500  
 ataaactgtg ttaagagcaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 550  
 aaaaaaaaaa aaaaaaaaaa 570

<210> 408

<211> 104

<212> PRT

<213> Homo sapiens

<400> 408

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Ser	Ser	Ala	Ala	Ala	Phe	Leu	Val	Gly	Ser	Ala	Lys	Pro	Val	Ala
				20					25					30
Gln	Pro	Val	Ala	Ala	Leu	Glu	Ser	Ala	Ala	Glu	Ala	Gly	Ala	Gly
				35					40					45
Thr	Leu	Ala	Asn	Pro	Leu	Gly	Thr	Leu	Asn	Pro	Leu	Lys	Leu	Leu
				50					55					60
Leu	Ser	Ser	Leu	Gly	Ile	Pro	Val	Asn	His	Leu	Ile	Glu	Gly	Ser
				65					70					75
Gln	Lys	Cys	Val	Ala	Glu	Leu	Gly	Pro	Gln	Ala	Val	Gly	Ala	Val
				80					85					90
Lys	Ala	Leu	Lys	Ala	Leu	Leu	Gly	Ala	Leu	Thr	Val	Phe	Gly	
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<210> 409

<211> 2089

<212> DNA

<213> Homo sapiens

<400> 409

tgaaggactt ttccaggacc caaggccaca cactggaagt cttgcagctg 50  
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 agtctctctg tctccgtctc cctggcacag gtgtggctgg tacccggctt 150  
 ggccccagc cctcagtcgc cagagacccc agccccctcag aaccagacca 200  
 gcagggtagt gcaggctccc agggaggaag aggaagatga gcaggaggcc 250  
 agcgaggaga aggccggtga ggaagagaaa gcctggctga tggccagcag 300  
 gcagcagctt gccaaaggaga cttcaaaactt cggattcagc ctgctgcgaa 350  
 agatctccat gaggcacgat ggcaacatgg tcttctctcc atttggcatg 400  
 tccttggtcca tgacaggctt gatgtctggg gccacagggc cgactgaaac 450  
 ccagatcaag agagggtctc acttgcaggc cctgaagccc accaagcccc 500

ggctcctgcc ttccctcttt aagggactca gagagaccct ctcccgaac 550  
 ctggaactgg gcctctcaca ggggagtttt gccttcatcc acaaggattt 600  
 tgatgtcaaa gagactttct tcaatttato caagaggat tttgatacag 650  
 agtgcgtgcc tatgaatttt cgcaatgcct cacaggccaa aaggctcatg 700  
 aatcattaca ttaacaaaga gactcggggg aaaattccca aactgtttga 750  
 tgagattaat cctgaaacca aattaattct tgtggattac atcttgttca 800  
 aagggaatg gttgacccca tttgacctg tcttaccga agtcgacact 850  
 ttccacctgg acaagtacaa gaccattaag gtgccatga tgtacggtgc 900  
 aggcaagttt gctccacct ttgacaagaa ttttctgtgt catgtcctca 950  
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 agttcaagct agatcagaag tatgagatgc atgagctgct taggcagatg 1150  
 ggaatcagaa gaatcttctc accctttgct gaccttagtg aactctcagc 1200  
 tactggaaga aatctccaag tatccagggt tttacgaaga acagtattg 1250  
 aagttgatga aaggggcact gaggcagtg caggaatctt gtcagaaatt 1300  
 actgcttatt ccatgcctcc tgtcatcaaa gtggaccgac catttcattt 1350  
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 aaataaatat agtagtcccc acttatctga ggggataca ttcaaagacc 1600  
 cccagcagat gcctgaaacg gtggacagtg ctgaacctta tatatatatt 1650  
 ttctacaca tacataccta tgataaagtt taatttataa attaggcaca 1700  
 gtaagagatt aacaataata acaacattaa gtaaaatgag ttacttgaac 1750  
 gcaagcactg caataccata acagtcaaac tgattataga gaaggctact 1800  
 aagtactca tgcctgggtt gggacagagc aggcagatgc aagattccat 1900  
 cccactactc agaattggcat gctgcttaag acttttagat tgtttatttc 1950  
 tggaaatttt catttaattg ttttgacca tggttgacca tggtaactg 2000  
 agactgcaga aagcaaaacc atggataagg gaggactact acaaaagcat 2050  
 taatttgata catatttttt aaaaaaaaa aaaaaaaaa 2089

<210> 410  
 <211> 444  
 <212> PRT  
 <213> Homo sapiens

<400> 410

Met	Lys	Val	Val	Pro	Ser	Leu	Leu	Leu	Ser	Val	Leu	Leu	Ala	Gln
1				5					10					15
Val	Trp	Leu	Val	Pro	Gly	Leu	Ala	Pro	Ser	Pro	Gln	Ser	Pro	Glu
				20					25					30
Thr	Pro	Ala	Pro	Gln	Asn	Gln	Thr	Ser	Arg	Val	Val	Gln	Ala	Pro
				35					40					45
Arg	Glu	Glu	Glu	Glu	Asp	Glu	Gln	Glu	Ala	Ser	Glu	Glu	Lys	Ala
				50					55					60
Gly	Glu	Glu	Glu	Lys	Ala	Trp	Leu	Met	Ala	Ser	Arg	Gln	Gln	Leu
				65					70					75
Ala	Lys	Glu	Thr	Ser	Asn	Phe	Gly	Phe	Ser	Leu	Leu	Arg	Lys	Ile
				80					85					90
Ser	Met	Arg	His	Asp	Gly	Asn	Met	Val	Phe	Ser	Pro	Phe	Gly	Met
				95					100					105
Ser	Leu	Ala	Met	Thr	Gly	Leu	Met	Leu	Gly	Ala	Thr	Gly	Pro	Thr
				110					115					120
Glu	Thr	Gln	Ile	Lys	Arg	Gly	Leu	His	Leu	Gln	Ala	Leu	Lys	Pro
				125					130					135
Thr	Lys	Pro	Gly	Leu	Leu	Pro	Ser	Leu	Phe	Lys	Gly	Leu	Arg	Glu
				140					145					150
Thr	Leu	Ser	Arg	Asn	Leu	Glu	Leu	Gly	Leu	Ser	Gln	Gly	Ser	Phe
				155					160					165
Ala	Phe	Ile	His	Lys	Asp	Phe	Asp	Val	Lys	Glu	Thr	Phe	Phe	Asn
				170					175					180
Leu	Ser	Lys	Arg	Tyr	Phe	Asp	Thr	Glu	Cys	Val	Pro	Met	Asn	Phe
				185					190					195
Arg	Asn	Ala	Ser	Gln	Ala	Lys	Arg	Leu	Met	Asn	His	Tyr	Ile	Asn
				200					205					210
Lys	Glu	Thr	Arg	Gly	Lys	Ile	Pro	Lys	Leu	Phe	Asp	Glu	Ile	Asn
				215					220					225
Pro	Glu	Thr	Lys	Leu	Ile	Leu	Val	Asp	Tyr	Ile	Leu	Phe	Lys	Gly
				230					235					240
Lys	Trp	Leu	Thr	Pro	Phe	Asp	Pro	Val	Phe	Thr	Glu	Val	Asp	Thr
				245					250					255
Phe	His	Leu	Asp	Lys	Tyr	Lys	Thr	Ile	Lys	Val	Pro	Met	Met	Tyr
				260					265					270
Gly	Ala	Gly	Lys	Phe	Ala	Ser	Thr	Phe	Asp	Lys	Asn	Phe	Arg	Cys
				275					280					285

His Val Leu Lys Leu Pro Tyr Gln Gly Asn Ala Thr Met Leu Val  
 290 295 300  
 Val Leu Met Glu Lys Met Gly Asp His Leu Ala Leu Glu Asp Tyr  
 305 310 315  
 Leu Thr Thr Asp Leu Val Glu Thr Trp Leu Arg Asn Met Lys Thr  
 320 325 330  
 Arg Asn Met Glu Val Phe Phe Pro Lys Phe Lys Leu Asp Gln Lys  
 335 340 345  
 Tyr Glu Met His Glu Leu Leu Arg Gln Met Gly Ile Arg Arg Ile  
 350 355 360  
 Phe Ser Pro Phe Ala Asp Leu Ser Glu Leu Ser Ala Thr Gly Arg  
 365 370 375  
 Asn Leu Gln Val Ser Arg Val Leu Arg Arg Thr Val Ile Glu Val  
 380 385 390  
 Asp Glu Arg Gly Thr Glu Ala Val Ala Gly Ile Leu Ser Glu Ile  
 395 400 405  
 Thr Ala Tyr Ser Met Pro Pro Val Ile Lys Val Asp Arg Pro Phe  
 410 415 420  
 His Phe Met Ile Tyr Glu Glu Thr Ser Gly Met Leu Leu Phe Leu  
 425 430 435  
 Gly Arg Val Val Asn Pro Thr Leu Leu  
 440

<210> 411  
 <211> 636  
 <212> DNA  
 <213> Homo sapiens

<400> 411  
 ctgggatcag ccaactgcagc tccttgagca ctctctacag agacgcggac 50  
 cccagacatg aggaggctcc tcttggtcac cagcctggtg gttgtgctgc 100  
 tgtggggaggc aggtgcagtc ccagcaccca aggtccctat caagatgcaa 150  
 gtcaaacact ggccctcaga gcaggaccca gagaaggcct gggcgcccg 200  
 tgtgtgtggag cctccggaga aggacgacca gctggtggtg ctgttccctg 250  
 tccagaagcc gaaactcttg accaccgagg agaagccacg aggtcagggc 300  
 aggggcccca tccttcagg caccaaggcc tggatggaga ccgaggacac 350  
 cctgggcccgt gtcctgagtc ccgagccga coatgacagc ctgtaccacc 400  
 ctccgcctga ggaggaccg ggcgaggaga ggccccggtt gtgggtgatg 450  
 ccaaatacacc aggtgctcct gggaccggag gaagaccaag accacatcta 500  
 ccacccccag tagggctcca ggggccatca ctgccccgcg cctgtcccaa 550  
 ggcccaggct gttgggactg ggaccctccc taccctgccc cagctagaca 600



aataaacccc agcaggcaaa aaaaaaaaaa aaaaaa 636

<210> 412  
<211> 151  
<212> PRT  
<213> Homo sapiens

<400> 412  
Met Arg Arg Leu Leu Leu Val Thr Ser Leu Val Val Val Leu Leu  
1 5 10 15  
Trp Glu Ala Gly Ala Val Pro Ala Pro Lys Val Pro Ile Lys Met  
20 25 30  
Gln Val Lys His Trp Pro Ser Glu Gln Asp Pro Glu Lys Ala Trp  
35 40 45  
Gly Ala Arg Val Val Glu Pro Pro Glu Lys Asp Asp Gln Leu Val  
50 55 60  
Val Leu Phe Pro Val Gln Lys Pro Lys Leu Leu Thr Thr Glu Glu  
65 70 75  
Lys Pro Arg Gly Gln Gly Arg Gly Pro Ile Leu Pro Gly Thr Lys  
80 85 90  
Ala Trp Met Glu Thr Glu Asp Thr Leu Gly Arg Val Leu Ser Pro  
95 100 105  
Glu Pro Asp His Asp Ser Leu Tyr His Pro Pro Pro Glu Glu Asp  
110 115 120  
Gln Gly Glu Glu Arg Pro Arg Leu Trp Val Met Pro Asn His Gln  
125 130 135  
Val Leu Leu Gly Pro Glu Glu Asp Gln Asp His Ile Tyr His Pro  
140 145 150  
Gln

<210> 413  
<211> 1176  
<212> DNA  
<213> Homo sapiens

<400> 413  
agaaagctgc actctgttga gctccagggc gcagtggagg gagggagtga 50  
aggagctctc tgtacccaag gaaagtgcag ctgagactca gacaagatta 100  
caatgaacca actcagcttc ctgctgtttc tcatagcgac caccagagga 150  
tggagtacag atgaggctaa tacttacttc aaggaatgga cctgttcttc 200  
gtctccatct ctgcccgaaa gctgcaagga aatcaaagac gaatgtccta 250  
gtgcatttga tggcctgtat ttctccgca ctgagaatgg tgttatctac 300  
cagaccttct gtgacatgac ctctgggggt ggcggctgga ccctgtgtgc 350  
cagcgtgcat gagaatgaca tgcgtgggaa gtgcacgggt ggcgatcgct 400

ggtccagtcg gcagggcagc aaagcagact acccagaggg ggacggcaac 450  
 tggggccaact acaacacctt tggatctgca gaggcggcca cgagcgatga 500  
 ctacaagaac cctggctact acgacatcca ggccaaggac ctgggcctct 550  
 ggcacgtgcc caataagtcc cccatgcagc actggagaaa cagctccctg 600  
 ctgaggtacc gcacggacac tggcttcctc cagacactgg gacataatct 650  
 gtttggcatc taccagaaat atccagtgaa atatggagaa ggaaagtgtt 700  
 ggactgacaa cggcccggtg atccctgtgg totatgattt tggcgacgcc 750  
 cagaaaacag catcttatta ctaccctat ggccagcggg aattcactgc 800  
 gggattttgt cagttcaggg tatttaataa cgagagagca gccaacgcct 850  
 tgtgtgctgg aatgagggtc accggtgtga aactgagca tcaactgcat 900  
 ggtggaggag gatactttcc agaggccagt ccccgagcgt gtggagattt 950  
 ttctggtttt gattggagtg gatatggaac tcatgttggt tacagcagca 1000  
 gccgtgagat aactgaggca gctgtgcttc tattctatcg ttgagagttt 1050  
 tgtggggagg aaccagacc tctcctccca accatgagat cccaaggatg 1100  
 gagaacaact taccagtag ctagaatgtt aatggcagaa gagaaaacaa 1150  
 taaatcatat tgactcaaga aaaaaa 1176

<210> 414

<211> 313

<212> PRT

<213> Homo sapiens

<400> 414

Met	Asn	Gln	Leu	Ser	Phe	Leu	Leu	Phe	Leu	Ile	Ala	Thr	Thr	Arg
1				5					10					15
Gly	Trp	Ser	Thr	Asp	Glu	Ala	Asn	Thr	Tyr	Phe	Lys	Glu	Trp	Thr
				20					25					30
Cys	Ser	Ser	Ser	Pro	Ser	Leu	Pro	Arg	Ser	Cys	Lys	Glu	Ile	Lys
				35					40					45
Asp	Glu	Cys	Pro	Ser	Ala	Phe	Asp	Gly	Leu	Tyr	Phe	Leu	Arg	Thr
				50					55					60
Glu	Asn	Gly	Val	Ile	Tyr	Gln	Thr	Phe	Cys	Asp	Met	Thr	Ser	Gly
				65					70					75
Gly	Gly	Gly	Trp	Thr	Leu	Val	Ala	Ser	Val	His	Glu	Asn	Asp	Met
				80					85					90
Arg	Gly	Lys	Cys	Thr	Val	Gly	Asp	Arg	Trp	Ser	Ser	Gln	Gln	Gly
				95					100					105
Ser	Lys	Ala	Asp	Tyr	Pro	Glu	Gly	Asp	Gly	Asn	Trp	Ala	Asn	Tyr
				110					115					120
Asn	Thr	Phe	Gly	Ser	Ala	Glu	Ala	Ala	Thr	Ser	Asp	Asp	Tyr	Lys

125	130	135
Asn Pro Gly Tyr Tyr Asp Ile Gln Ala	Lys Asp Leu Gly Ile Trp	140
His Val Pro Asn Lys Ser Pro Met Gln	His Trp Arg Asn Ser Ser	155
Leu Leu Arg Tyr Arg Thr Asp Thr Gly	Phe Leu Gln Thr Leu Gly	170
His Asn Leu Phe Gly Ile Tyr Gln Lys	Tyr Pro Val Lys Tyr Gly	185
Glu Gly Lys Cys Trp Thr Asp Asn Gly	Pro Val Ile Pro Val Val	200
Tyr Asp Phe Gly Asp Ala Gln Lys Thr	Ala Ser Tyr Tyr Ser Pro	215
Tyr Gly Gln Arg Glu Phe Thr Ala Gly	Phe Val Gln Phe Arg Val	230
Phe Asn Asn Glu Arg Ala Ala Asn Ala	Leu Cys Ala Gly Met Arg	245
Val Thr Gly Cys Asn Thr Glu His His	Cys Ile Gly Gly Gly Gly	260
Tyr Phe Pro Glu Ala Ser Pro Gln Gln	Cys Gly Asp Phe Ser Gly	275
Phe Asp Trp Ser Gly Tyr Gly Thr His	Val Gly Tyr Ser Ser Ser	290
Arg Glu Ile Thr Glu Ala Ala Val Leu	Leu Phe Tyr Arg	305

<210> 415  
 <211> 1281  
 <212> DNA  
 <213> Homo sapiens

<400> 415  
 gcggagccgg cgccggctgc gcagaggagc cgctctcgcc gccgccacct 50  
 cggctgggag cccacgaggc tgccgcatcc tgccctcgga acaatgggac 100  
 toggcgcgcg aggtgcttgg gccgcgctgc tcttggggac gctgcaggtg 150  
 ctagcgctgc tggggggccgc ccatgaaaagc gcagccatgg cgcatctgc 200  
 aaacatagag aattctgggc ttccacacaa ctccagtgt aactcaacag 250  
 agactctcca acatgtgct tctgaccata caaatgaaac ttccaacagt 300  
 actgtgaaac caccaacttc agttgcctca gactccagta atacaacggt 350  
 caccaccatg aaacctacag cggcatctaa tacaacaaca coagggatgg 400  
 tctcaacaaa tatgacttct accaccttaa agtctacacc caaacaaca 450  
 agtgtttc acagaacatc tcagatatca acatccacaa tgaccgtaac 500

ccacaatagt tcagtgacat ctgctgcttc atcagtaaca atcacaacaa 550  
 ctatgcattc tgaagcaaaag aaaggatcaa aatttgatac tgggagcttt 600  
 gtgttggtga ttgtattaac gctgggagtt ttatctatc tttacattgg 650  
 atgcaaaatg tattaactcaa gaagaggcat tcggtatcga accatagatg 700  
 aacatgatgc catcatttaa ggaaatccat ggaccaagga tggaatacag 750  
 attgatgctg ccctatcaat taatttttgt ttattaatag tttaaaacaa 800  
 tattctcttt ttgaaaatag tataaacagg coatgcataa aatgtacagt 850  
 gtattacgta aatatgtaaa gattcttcaa ggtaacaagg gtttgggttt 900  
 tgaataaacc atctggatct tatagaccgt tcataacaatg gtttagcaa 950  
 gttcatagta agacaaacaa gtctatctt ttttttttgg ctggggtggg 1000  
 ggcatgtgc acatatgacc agtaattgaa agacgtcacc actgaaagac 1050  
 agaatgcat ctgggcatac aaataagaag tttgtcacag cactcaggat 1100  
 tttgggtatc tttttagctt cacataaaga acttcagtgc ttttcagagc 1150  
 tggatatac ttaattacta atgccacaca gaaattatac aatcaaaacta 1200  
 gatctgaagc ataatttaag aaaaacatca acattttttg tgctttaaac 1250  
 tgtagtagtt ggtctagaaa caaaatactc c 1281

<210> 416  
 <211> 208  
 <212> PRT  
 <213> Homo sapiens

<400> 416  
 Met Gly Leu Gly Ala Arg Gly Ala Trp Ala Ala Leu Leu Leu Gly  
 1 5 10 15  
 Thr Leu Gln Val Leu Ala Leu Leu Gly Ala Ala His Glu Ser Ala  
 20 25 30  
 Ala Met Ala Ala Ser Ala Asn Ile Glu Asn Ser Gly Leu Pro His  
 35 40 45  
 Asn Ser Ser Ala Asn Ser Thr Glu Thr Leu Gln His Val Pro Ser  
 50 55 60  
 Asp His Thr Asn Glu Thr Ser Asn Ser Thr Val Lys Pro Pro Thr  
 65 70 75  
 Ser Val Ala Ser Asp Ser Ser Asn Thr Thr Val Thr Thr Met Lys  
 80 85 90  
 Pro Thr Ala Ala Ser Asn Thr Thr Thr Pro Gly Met Val Ser Thr  
 95 100 105  
 Asn Met Thr Ser Thr Thr Leu Lys Ser Thr Pro Lys Thr Thr Ser  
 110 115 120  
 Val Ser Gln Asn Thr Ser Gln Ile Ser Thr Ser Thr Met Thr Val

125	130	135
Thr His Asn Ser Ser Val Thr Ser Ala	Ala Ser Ser Val Thr Ile	
140	145	150
Thr Thr Thr Met His Ser Glu Ala Lys	Lys Gly Ser Lys Phe Asp	
155	160	165
Thr Gly Ser Phe Val Gly Gly Ile Val	Leu Thr Leu Gly Val Leu	
170	175	180
Ser Ile Leu Tyr Ile Gly Cys Lys Met	Tyr Tyr Ser Arg Arg Gly	
185	190	195
Ile Arg Tyr Arg Thr Ile Asp Glu His	Asp Ala Ile Ile	
200	205	

<210> 417  
 <211> 1728  
 <212> DNA  
 <213> Homo sapiens

<400> 417  
 cagccgggtc ccaagcctgt gctgagcct gagcctgagc ctgagcccca 50  
 gccgggagcc ggtcgcgggg gctccgggct gtgggaccgc tgggccccca 100  
 gcgatggcga cctgtgtggg aggccttctt cggcttggct ccttgctcag 150  
 cctgtcgtgc ctggcgcttt cgtgctgct gctggcgagc ctgtcagacg 200  
 ccgccaagaa ttctgaggat gtcagatgta aatgtatctg cctccctat 250  
 aaagaaaatt ctgggcatat ttataataag aacatatctc agaagattg 300  
 tgattgcctt catgtttgtg agcccatgcc tgtgcggggg cctgatgtag 350  
 aagcatactg tctacgctgt gaatgcaa atgaagaaag aagctctgtc 400  
 acaatcaagg ttaccattat aatttatctc tccattttgg gccttctact 450  
 tctgtacatg gtatatctta ctctggttga gccatactg aagaggcgcc 500  
 tctttggaca tgcacagttg atacagagtg atgatgat tggggatcac 550  
 cagccttttg caaatgcaca cgatgtgcta gcccgctccc gcagtcgagc 600  
 caacgtgctg aacaaggtag aatatgcaca gcagcgctgg aagcttcaag 650  
 tccaagagca gcgaaagtct gtctttgacc ggcagtgtgt cctcagctaa 700  
 ttgggaattg aattcaaggt gactagaaag aaacaggcag acaactggaa 750  
 ageactgact gggttttgct gggtttcatt ttaataoctt gttgatttca 800  
 ccaactgttg ctggaagatt caaaactgga agcaaaaact tgcttgattt 850  
 tttttctctg ttaacgtaat aatagagaca tttttaaaag cacacagctc 900  
 aaagtgcacc aataagtctt ttctattttg tgacttttac taataaaaaat 950  
 aaatctgcct gtaaattatc ttgaagtcct ttacctggaa caagcactct 1000

ctttttcacc acatagtttt aacttgactt tcaagataat tttcaggggt 1050  
 ttgtgtgttg ttgttttttg ttgtttgtt ttgtggggag aggggaggga 1100  
 tgctgggaa gtggttaaca acttttttca agtcacttta ctaaacaaac 1150  
 tttgtaaat agacottacc ttctatttcc gagtttoatt tatattttgc 1200  
 agtgtagcca gcctcatcaa agagctgact tactcatttg acttttgcac 1250  
 tgactgtatt atotgggtat ctgctgtgtc tgcacttcat ggtaaacggg 1300  
 atctaaaatg cctggtggct ttccacaaaa agcagatttt ctctatgtac 1350  
 tgtgatgtct gatgcaatgc atcctagaac aaactggcca ttgctagtt 1400  
 tactctaaag actaaacata gtcttggtgt gtgtggtctt actcatcttc 1450  
 tagtaccttt aaggacaaat cctaaggact tggacacttg caataaagaa 1500  
 attttatttt aaaccaagc ctccctggat tgataatata tacacatttg 1550  
 tcagcatttc cgtctgtgtg gagaggcagc tgtttgagct ccaatatgtg 1600  
 cagctttgaa ctagggtctg gggtgtgggt gcctcttctg aaaggcttaa 1650  
 ccattattgg ataactggct ttttcttcc tatgtcctct ttggaatga 1700  
 acaataaaaa taatttttga aacatcaa 1728

<210> 418  
 <211> 198  
 <212> PRT  
 <213> Homo sapiens

<400> 418  
 Met Ala Thr Leu Trp Gly Gly Leu Leu Arg Leu Gly Ser Leu Leu  
 1 5 10 15  
 Ser Leu Ser Cys Leu Ala Leu Ser Val Leu Leu Leu Ala Gln Leu  
 20 25 30  
 Ser Asp Ala Ala Lys Asn Phe Glu Asp Val Arg Cys Lys Cys Ile  
 35 40 45  
 Cys Pro Pro Tyr Lys Glu Asn Ser Gly His Ile Tyr Asn Lys Asn  
 50 55 60  
 Ile Ser Gln Lys Asp Cys Asp Cys Leu His Val Val Glu Pro Met  
 65 70 75  
 Pro Val Arg Gly Pro Asp Val Glu Ala Tyr Cys Leu Arg Cys Glu  
 80 85 90  
 Cys Lys Tyr Glu Glu Arg Ser Ser Val Thr Ile Lys Val Thr Ile  
 95 100 105  
 Ile Ile Tyr Leu Ser Ile Leu Gly Leu Leu Leu Tyr Met Val  
 110 115 120  
 Tyr Leu Thr Leu Val Glu Pro Ile Leu Lys Arg Arg Leu Phe Gly  
 125 130 135

His Ala Gln Leu Ile Gln Ser Asp Asp Ile Gly Asp His Gln  
 140 145 150  
 Pro Phe Ala Asn Ala His Asp Val Leu Ala Arg Ser Arg Ser Arg  
 155 160 165  
 Ala Asn Val Leu Asn Lys Val Glu Tyr Ala Gln Gln Arg Trp Lys  
 170 175 180  
 Leu Gln Val Gln Glu Gln Arg Lys Ser Val Phe Asp Arg His Val  
 185 190 195  
 Val Leu Ser

<210> 419  
 <211> 681  
 <212> DNA  
 <213> Homo sapiens

<400> 419  
 gcacctgcga ccaccgtgag cagtcatggc gtactccaca gtgcagagag 50  
 tgcgtctggc ttctgggctt gtctctggctc tgctcgctgct gctgcccaag 100  
 gccttctctgt ccgcgggaa gcggcaggag ccgcgcgcga cacctgaagg 150  
 aaaaattgggc cgatttccac ctatgatgca tcatcaccag gcaccctcag 200  
 atggccagac tcctggggct cgtttccaga ggtctcacct tgccgaggca 250  
 ttgcaaagg ccaaaggatc aggtggagggt gctggaggag gaggtagtgg 300  
 aagaggtctg atggggcaga ttattccaat ctacggtttt gggatttttt 350  
 tatatatact gtacattcta ttaaggtaa gtagaatcat cctaatacata 400  
 ttacatcaat gaaaatctaa tatggcgata aaaatcattg tctacattaa 450  
 aacttcttat agttcataaa attatttcaa atccatcato tctttaaatc 500  
 ctgcctctct ttcgatgagg acttaggata gccattattt cagtttcaca 550  
 taagaatgtt tactcaatgt ttaagtgttt tgcccaaaa ttcacaacta 600  
 acaaggcaga actaggactt gaacatggat cttttgggtc ttaatccagt 650  
 gagtataca attcaatgca ctcccctgcc a 681

<210> 420  
 <211> 128  
 <212> PRT  
 <213> Homo sapiens

<400> 420  
 Met Ala Tyr Ser Thr Val Gln Arg Val Ala Leu Ala Ser Gly Leu  
 1 5 10 15  
 Val Leu Ala Leu Ser Leu Leu Leu Pro Lys Ala Phe Leu Ser Arg  
 20 25 30  
 Gly Lys Arg Gln Glu Pro Pro Pro Thr Pro Glu Gly Lys Leu Gly  
 35 40 45

Arg Phe Pro Pro Met Met His His His Gln Ala Pro Ser Asp Gly  
50 55 60

Gln Thr Pro Gly Ala Arg Phe Gln Arg Ser His Leu Ala Glu Ala  
65 70 75

Phe Ala Lys Ala Lys Gly Ser Gly Gly Gly Ala Gly Gly Gly Gly  
80 85 90

Ser Gly Arg Gly Leu Met Gly Gln Ile Ile Pro Ile Tyr Gly Phe  
95 100 105

Gly Ile Phe Leu Tyr Ile Leu Tyr Ile Leu Phe Lys Val Ser Arg  
110 115 120

Ile Ile Leu Ile Ile Leu His Gln  
125

<210> 421  
<211> 1630  
<212> DNA  
<213> Homo sapiens

<400> 421  
cggtctcagtg cgagctgtgg ggagatttca gtgcattgcc tcccctgggt 50  
gtctctcatc ttggatttga aagttgagag cagcatgttt tgcccactga 100  
aactcatcct gctgccagtg ttactggatt attccttggg cctgaatgac 150  
ttgaatgttt ccccgctga gctaacagtc catgtgggtg attcagctct 200  
gatgggatgt gttttccaga gcacagaaga caaatgtata ttcaagatag 250  
actggactct gtcaccagga gagcacgcca aggacgaata tgtgctatac 300  
tattactcoa atctcagtg gctattggg cgcttcaga accgcgtaca 350  
cttgatgggg gacatcttat gcaatgatgg ctctctcctg ctccaagatg 400  
tgcaagaggg tgaccaggga acctatatct gtgaaatccg cctcaaaggg 450  
gagagccagg tgttcaagaa ggcggtggtg ctgcatgtgc ttccagagga 500  
gccccaaagag ctcatggttc atgtgggtgg attgattcag atgggatgtg 550  
ttttccagag cacagaagtg aaacacgtga ccaaggtaga atggatattt 600  
tcaggacggc gcgcaaagga ggagattgta ttctgttact acccaaaact 650  
caggatgtct gtggagtact cccagagctg gggccacttc cagaatcgtg 700  
tgaacctggt gggggacatt ttcogcaatg acggttccat catgcttcaa 750  
ggagtggagg agtcagatgg aggaactac acctgcagta tccacctagg 800  
gaacctggtg ttcaagaaaa ccattgtgct gcatgtcagc ccggaagagc 850  
ctcgaaact ggtgaccccg gcagccctga ggctctggtg cttgggtggt 900  
aatcagttgg tgatcattgt gggaattgtc tgtgccacaa tctgctgct 950  
ccctgttctg atattgatcg tgaagaagac ctgtggaaat aagagttcag 1000



tgaattctac agtcttggtg aagaacacga agaagactaa tccagagata 1050  
 aaagaaaaac cctgccattt tgaaagatgt gaaggggaga aacacattta 1100  
 ctccccaata attgtacggg aggtgatcga ggaagaagaa ccaagtga 1150  
 aatcagaggc cacctacatg accatgcacc cagtttggcc ttctctgagg 1200  
 tcagatcgga acaactcact tgaaaaaag tcaggtgggg gaatgccaaa 1250  
 aacacagcaa gccttttgag aagaatggag agtcccttca tctcagcagc 1300  
 ggtggagact ctctctgtg tgtgtcctgg gccactctac cagtgtattc 1350  
 agactccgc tctccagct gtctctctgt ctctattgtt ggtcaataca 1400  
 ctgaagatgg agaatttggg gcctggcaga gagactggac agctctggag 1450  
 gaacaggcct gctgagggga ggggagcatg gacttggcct ctggagtggg 1500  
 acactggccc tgggaaccag gctgagctga gtggcctcaa acccccgtt 1550  
 ggatcagacc ctctctgtggg caggggttct agtggatgag ttactgggaa 1600  
 gaatcagaga taaaaacaa cccaaatcaa 1630

<210> 422  
 <211> 394  
 <212> PRT  
 <213> Homo sapiens

<400> 422  
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 Tyr Ser Leu Gly Leu Asn Asp Leu Asn Val Ser Pro Pro Glu Leu  
 20 25 30  
 Thr Val His Val Gly Asp Ser Ala Leu Met Gly Cys Val Phe Gln  
 35 40 45  
 Ser Thr Glu Asp Lys Cys Ile Phe Lys Ile Asp Trp Thr Leu Ser  
 50 55 60  
 Pro Gly Glu His Ala Lys Asp Glu Tyr Val Leu Tyr Tyr Tyr Ser  
 65 70 75  
 Asn Leu Ser Val Pro Ile Gly Arg Phe Gln Asn Arg Val His Leu  
 80 85 90  
 Met Gly Asp Ile Leu Cys Asn Asp Gly Ser Leu Leu Leu Gln Asp  
 95 100 105  
 Val Gln Glu Ala Asp Gln Gly Thr Tyr Ile Cys Glu Ile Arg Leu  
 110 115 120  
 Lys Gly Glu Ser Gln Val Phe Lys Lys Ala Val Val Leu His Val  
 125 130 135  
 Leu Pro Glu Glu Pro Lys Glu Leu Met Val His Val Gly Gly Leu  
 140 145 150  
 Ile Gln Met Gly Cys Val Phe Gln Ser Thr Glu Val Lys His Val

155	160	165
Thr Lys Val Glu Trp Ile Phe Ser Gly	Arg Arg Ala Lys Glu Glu	
170	175	180
Ile Val Phe Arg Tyr Tyr His Lys Leu	Arg Met Ser Val Glu Tyr	
185	190	195
Ser Gln Ser Trp Gly His Phe Gln Asn	Arg Val Asn Leu Val Gly	
200	205	210
Asp Ile Phe Arg Asn Asp Gly Ser Ile	Met Leu Gln Gly Val Arg	
215	220	225
Glu Ser Asp Gly Gly Asn Tyr Thr Cys	Ser Ile His Leu Gly Asn	
230	235	240
Leu Val Phe Lys Lys Thr Ile Val Leu	His Val Ser Pro Glu Glu	
245	250	255
Pro Arg Thr Leu Val Thr Pro Ala Ala	Leu Arg Pro Leu Val Leu	
260	265	270
Gly Gly Asn Gln Leu Val Ile Ile Val	Gly Ile Val Cys Ala Thr	
275	280	285
Ile Leu Leu Leu Pro Val Leu Ile Leu	Ile Val Lys Lys Thr Cys	
290	295	300
Gly Asn Lys Ser Ser Val Asn Ser Thr	Val Leu Val Lys Asn Thr	
305	310	315
Lys Lys Thr Asn Pro Glu Ile Lys Glu	Lys Pro Cys His Phe Glu	
320	325	330
Arg Cys Glu Gly Glu Lys His Ile Tyr	Ser Pro Ile Ile Val Arg	
335	340	345
Glu Val Ile Glu Glu Glu Glu Pro Ser	Glu Lys Ser Glu Ala Thr	
350	355	360
Tyr Met Thr Met His Pro Val Trp Pro	Ser Leu Arg Ser Asp Arg	
365	370	375
Asn Asn Ser Leu Glu Lys Lys Ser Gly	Gly Gly Met Pro Lys Thr	
380	385	390
Gln Gln Ala Phe		

<210> 423  
 <211> 963  
 <212> DNA  
 <213> Homo sapiens

<400> 423  
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 ccactctcaca tggttctacc ctactaaaga caggaagatc ataaactgac 100  
 agatactgaa attgtaagag ttggaaacta cattttgcaa agtcattgaa 150  
 ctctgagctc agttgcagta ctcggaagc catgcaggat gaagatggat 200

acatcacctt aaatattaaa actcggaac cagctctcgt ctccgttggc 250  
 cctgcacccct cctcctggtg gcgtgtgatg gctttgattc tgctgatcct 300  
 gtgcgtgggg atggttgctg ggctgggtggc tctggggatt tggctctgtca 350  
 tgcagcgcaa ttacctacaa gatgagaatg aaaatcgac aggaactctg 400  
 caacaattag caaagcgctt ctgtcaatat gtggtaaaac aatcagaact 450  
 aaagggcact ttcaaaggtc ataatgcag cccctgtgac acaactgga 500  
 gatattatgg agatagctgc tatgggttct tcaggcacia cttacatg 550  
 gaagagagta agcagtactg cactgacatg aatgctactc tctgaagat 600  
 tgacaaccgg aacattgtgg agtacatcaa agccaggact catttaattc 650  
 gttgggtcgg attatctcgc cagaagtcga atgaggtctg gaagtgggag 700  
 gatggctcgg ttatctcaga aaatatgttt gagtttttgg aagatggaaa 750  
 aggaaatag aattgtgctt attttcataa tgggaaaatg caccctac 800  
 tctgtgagaa caaacattat ttaatgtgtg agaggaagcg tggcatgacc 850  
 aaggtggacc aactacotta atgcaaagag gtggacagga taacacagat 900  
 aagggtctta ttgtacaata aaagatatgt atgaatgcat cagtagctga 950  
 aaaaaaaaaa aaa 963

<210> 424  
 <211> 229  
 <212> PRT  
 <213> Homo sapiens

<400> 424  
 Met Gln Asp Glu Asp Gly Tyr Ile Thr Leu Asn Ile Lys Thr Arg  
 1 5 10 15  
 Lys Pro Ala Leu Val Ser Val Gly Pro Ala Ser Ser Ser Trp Trp  
 20 25 30  
 Arg Val Met Ala Leu Ile Leu Leu Ile Leu Cys Val Gly Met Val  
 35 40 45  
 Val Gly Leu Val Ala Leu Gly Ile Trp Ser Val Met Gln Arg Asn  
 50 55 60  
 Tyr Leu Gln Asp Glu Asn Glu Asn Arg Thr Gly Thr Leu Gln Gln  
 65 70 75  
 Leu Ala Lys Arg Phe Cys Gln Tyr Val Val Lys Gln Ser Glu Leu  
 80 85 90  
 Lys Gly Thr Phe Lys Gly His Lys Cys Ser Pro Cys Asp Thr Asn  
 95 100 105  
 Trp Arg Tyr Tyr Gly Asp Ser Cys Tyr Gly Phe Phe Arg His Asn  
 110 115 120  
 Leu Thr Trp Glu Glu Ser Lys Gln Tyr Cys Thr Asp Met Asn Ala

	125		130		135
Thr Leu Leu Lys	Ile Asp Asn Arg Asn	Ile Val Glu Tyr Ile	Lys		
	140	145	150		
Ala Arg Thr His	Leu Ile Arg Trp Val	Gly Leu Ser Arg Gln	Lys		
	155	160	165		
Ser Asn Glu Val	Trp Lys Trp Glu Asp	Gly Ser Val Ile Ser	Glu		
	170	175	180		
Asn Met Phe Glu	Phe Leu Glu Asp Gly	Lys Gly Asn Met Asn	Cys		
	185	190	195		
Ala Tyr Phe His	Asn Gly Lys Met His	Pro Thr Phe Cys Glu	Asn		
	200	205	210		
Lys His Tyr Leu	Met Cys Glu Arg Lys	Ala Gly Met Thr Lys	Val		
	215	220	225		
Asp Gln Leu Pro					

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<220>  
 <223> Synthetic oligonucleotide probe

<400> 425  
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<210> 426  
 <211> 26  
 <212> DNA  
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<220>  
 <223> Synthetic oligonucleotide probe

<400> 426  
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<210> 427  
 <211> 49  
 <212> DNA  
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<220>  
 <223> Synthetic oligonucleotide probe

<400> 427  
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<210> 428  
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<220>  
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<400> 428  
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 <210> 429  
 <211> 17  
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 <223> Synthetic oligonucleotide probe  
  
 <400> 429  
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 <210> 430  
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 <223> Synthetic oligonucleotide probe  
  
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 caaaaagcct ggaagtcttc aaag 24  
  
 <210> 431  
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 <223> Synthetic oligonucleotide probe  
  
 <400> 431  
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 <211> 22  
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 <223> Synthetic oligonucleotide probe  
  
 <400> 432  
 cagtgagcac agcaagtgtc ct 22  
  
 <210> 433  
 <211> 28  
 <212> DNA  
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 <223> Synthetic oligonucleotide probe  
  
 <400> 433  
 ggccacctcc ttgagtcttc agttccct 28  
  
 <210> 434  
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<220>  
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 <400> 434  
 caactactgg ctaaagctgg tgaa 24  
  
 <210> 435  
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 <400> 435  
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 <210> 436  
 <211> 24  
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 <400> 436  
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 <210> 437  
 <211> 22  
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 <400> 437  
 ctgaagacga cgcgattac ta 22  
  
 <210> 438  
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 <400> 438  
 ggcagaaatg ggaggcaga 19  
  
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 cagcacocca ggcagctctgt gtgt 24  
  
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 <210> 453  
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 cacagcatat tcagatgact aaatcca 27  
  
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 <400> 454  
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 <210> 455  
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 <400> 455  
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 <210> 459  
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 tagacaggga ccatggcccg ca 22  
  
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 <400> 482  
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 <212> DNA  
 <213> Artificial Sequence  
  
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 <210> 484  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
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 <400> 484  
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 <210> 485  
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 <210> 486  
 <211> 21

<212> DNA  
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<210> 492  
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<220>  
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<400> 492  
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<210> 493  
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<212> DNA  
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<220>  
<223> Synthetic oligonucleotide probe

<400> 493  
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<210> 494  
<211> 1231  
<212> DNA  
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cagcccgcgc gggagccgga ccgcgcgcg aggagctcgg acggcatgtc 150  
gagccccctc ctttgtgtga gcccgagtcg ggagaagccc gggcaaacgc 200  
aggctaagga gaccaaagcg gcgaagtgc gagacagcgg acaagcagcg 250  
gaggagaagg aggaggaggc gaaccagag aggggcagca aaagaagcgg 300  
tgggtggtgg cgctgtggcc atggcggcgg ctatcgccag ctcgctcacc 350  
cgtcagaaga ggcaagccc cgagcgcgag aaatccaacg cctgcaagtg 400  
tgtcagcagc cccagcaaag gcaagaccag ctgcgacaaa acaagttaa 450  
atgtcttttc ccgggtcaaa ctcttcggct ccaagaagag gcgcagaaga 500  
agaccagagc ctacagcttaa gggatatagt accaagctat acagccgaca 550  
aggctaccac ttgcagctgc aggcggatgg aaccattgat ggcaccaaag 600  
atgaggacag cacttacact ctgtttaacc tcatccctgt gggctctgca 650  
gtggtggcta tccaaggagt tcaaaccaag ctgtacttgg caatgaacag 700  
tgagggatac ttgtacacct cggaactttt cacacctgag tgcaaatcca 750  
aagaatcagt gtttgaaaaa tattatgtga catattcaco aatgatatac 800  
cgtcagcagc agtcaggccc aggggtgtat ctgggtctga acaagaagag 850  
agagatcatg aaaggcaacc atgtgaagaa gaacaagcct gcagctcatt 900



ttctgcctaa accactgaaa gtggccatgt acaaggagcc atcactgcac 950  
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 aagtgtctct ggctgtctga acggaggcaa atccatgagc cacaatgaat 1050  
 caacgtagcc agtgagggca aaagaagggc tctgtaacag aaccttacct 1100  
 ccagggtctg ttgaattctt ctgacagtc ttcacccaaa agttcaaat 1150  
 tgtaagtgc atttaccaaa caaacaggca gaggttcacta ttctatctgc 1200  
 cattagacct tcttatcatc cataactaaag c 1231

<210> 495  
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 <212> PRT  
 <213> Homo Sapien

<400> 495  
 Met Ala Ala Ala Ile Ala Ser Ser Leu Ile Arg Gln Lys Arg Gln  
 1 5 10 15  
 Ala Arg Glu Arg Glu Lys Ser Asn Ala Cys Lys Cys Val Ser Ser  
 20 25 30  
 Pro Ser Lys Gly Lys Thr Ser Cys Asp Lys Asn Lys Leu Asn Val  
 35 40 45  
 Phe Ser Arg Val Lys Leu Phe Gly Ser Lys Lys Arg Arg Arg Arg  
 50 55 60  
 Arg Pro Glu Pro Gln Leu Lys Gly Ile Val Thr Lys Leu Tyr Ser  
 65 70 75  
 Arg Gln Gly Tyr His Leu Gln Leu Gln Ala Asp Gly Thr Ile Asp  
 80 85 90  
 Gly Thr Lys Asp Glu Asp Ser Thr Tyr Thr Leu Phe Asn Leu Ile  
 95 100 105  
 Pro Val Gly Leu Arg Val Val Ala Ile Gln Gly Val Gln Thr Lys  
 110 115 120  
 Leu Tyr Leu Ala Met Asn Ser Glu Gly Tyr Leu Tyr Thr Ser Glu  
 125 130 135  
 Leu Phe Thr Pro Glu Cys Lys Phe Lys Glu Ser Val Phe Glu Asn  
 140 145 150  
 Tyr Tyr Val Thr Tyr Ser Ser Met Ile Tyr Arg Gln Gln Gln Ser  
 155 160 165  
 Gly Arg Gly Trp Tyr Leu Gly Leu Asn Lys Glu Gly Glu Ile Met  
 170 175 180  
 Lys Gly Asn His Val Lys Lys Asn Lys Pro Ala Ala His Phe Leu  
 185 190 195  
 Pro Lys Pro Leu Lys Val Ala Met Tyr Lys Glu Pro Ser Leu His  
 200 205 210  
 Asp Leu Thr Glu Phe Ser Arg Ser Gly Ser Gly Thr Pro Thr Lys

Ser Arg Ser Val Ser Gly Val Leu Asn Gly Gly Lys Ser Met Ser  
230 235 240

His Asn Glu Ser Thr  
245

<210> 496

<211> 1471

<212> DNA

<213> Homo Sapien

<400> 496

ccaggatgga gctggggcct gtatagccat attattgttc tatgctacta 50  
gacatggggg ggacttggtg aaaaaggtat tatccagcca gaggtctgg 100  
gagccctgtc ttactgaacc tgggcaacct ggatattctg agacatatatt 150  
tggggggatt tcagtgaaaa aagtggggga tccctccat ttagagtgtg 200  
gcaaaggaaa aaacaccaag gttgggttcc ttcttgacat tggcagtgcc 250  
ccagtggggg tgggatgagc gaatatctcc aaagctaaaag tccacacccc 300  
tgtagattac aagagtggat ttggcaggag tgtgccccaa aatacagtgg 350  
aaagtgccct gaagatatatt aaaccacgtc ttggaaattt agtgggtctt 400  
ggctttggga taggtgaagt gaggacagac actggagagg agggaaaggg 450  
gacgttttca ataggaggca aaactcgagg gtgggatcca ctgaggagta 500  
cataggctgc tggatctggt ggagccagca ctgggccccc gggtggtaac 550  
tggctgctgt ggaggggggt acgtgagggg ggggtctggg gcttatcctc 600  
aggtcctgtg ggtggggcag cgagtcgggg cctgagcgtc aagagcatgc 650  
cctagtgagc gggctcctct gggggagccc agcgcgctcc gggcgctgc 700  
cggtttgggg gtgtctcctc ccggggcgct atggcgggcg tggccagtag 750  
cctgatccgg cagaagcggg aggtcccga gcccgggggc agccggccgg 800  
tgtcggcgca gggcgcggtg tgtccccgcg gcaccaagtc cctttgccag 850  
aagcagctcc tcactctgct gtccaagggt cgactgtgcg gggggcgccc 900  
cgcgcgcccg gacccgggcc cgagacctca gctcaaggc atcgctacca 950  
aactgttctg ccgccagggt ttctacctcc aggcgaatcc cgacggaagc 1000  
atccagggca cccagaggga taccagctcc ttaccccaact tcaacctgat 1050  
ccctgtgggc ctccgtgtgg tcaccatcca gagcgccaag ctgggtcact 1100  
acatggccat gaatctgag ggactgtctt acagtctgcc gcatttcaca 1150  
gctgagtgtc gctttaagga gtgtgtcttt gagaattact acgtcctgta 1200  
cgctctgct ctctaccgcc agcgtcgttc tggccggggc tggtaacctg 1250

gcctggacaa ggagggccag gtcatgaagg gaaaccgagt taagaagacc 1300  
aaggcagctg cccactttct gccaagctc ctggagggtg ccatgtacca 1350  
ggagccttct ctccacagtg tccccgaggc ctccccttcc agtccccctg 1400  
ccccctgaaa tgtagtcctt ggactggagg ttcctgcac tcccagtga 1450  
ccagccacca ccacaacctg t 1471

<210> 497

<211> 225

<212> PRT

<213> Homo Sapien

<400> 497

Met	Ala	Ala	Leu	Ala	Ser	Ser	Leu	Ile	Arg	Gln	Lys	Arg	Glu	Val
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Arg	Glu	Pro	Gly	Gly	Ser	Arg	Pro	Val	Ser	Ala	Gln	Arg	Arg	Val
			20						25				30	
Cys	Pro	Arg	Gly	Thr	Lys	Ser	Leu	Cys	Gln	Lys	Gln	Leu	Leu	Ile
			35						40				45	
Leu	Leu	Ser	Lys	Val	Arg	Leu	Cys	Gly	Gly	Arg	Pro	Ala	Arg	Pro
			50						55				60	
Asp	Arg	Gly	Pro	Glu	Pro	Gln	Leu	Lys	Gly	Ile	Val	Thr	Lys	Leu
			65						70				75	
Phe	Cys	Arg	Gln	Gly	Phe	Tyr	Leu	Gln	Ala	Asn	Pro	Asp	Gly	Ser
			80						85				90	
Ile	Gln	Gly	Thr	Pro	Glu	Asp	Thr	Ser	Ser	Phe	Thr	His	Phe	Asn
			95						100				105	
Leu	Ile	Pro	Val	Gly	Leu	Arg	Val	Val	Thr	Ile	Gln	Ser	Ala	Lys
			110						115				120	
Leu	Gly	His	Tyr	Met	Ala	Met	Asn	Ala	Glu	Gly	Leu	Leu	Tyr	Ser
			125						130				135	
Ser	Pro	His	Phe	Thr	Ala	Glu	Cys	Arg	Phe	Lys	Glu	Cys	Val	Phe
			140						145				150	
Glu	Asn	Tyr	Tyr	Val	Leu	Tyr	Ala	Ser	Ala	Leu	Tyr	Arg	Gln	Arg
			155						160				165	
Arg	Ser	Gly	Arg	Ala	Trp	Tyr	Leu	Gly	Leu	Asp	Lys	Glu	Gly	Gln
			170						175				180	
Val	Met	Lys	Gly	Asn	Arg	Val	Lys	Lys	Thr	Lys	Ala	Ala	Ala	His
			185						190				195	
Phe	Leu	Pro	Lys	Leu	Leu	Glu	Val	Ala	Met	Tyr	Gln	Glu	Pro	Ser
			200						205				210	
Leu	His	Ser	Val	Pro	Glu	Ala	Ser	Pro	Ser	Ser	Pro	Pro	Ala	Pro
			215						220				225	

<210> 498

<211> 744

<212> DNA  
<213> Homo Sapien

<400> 498  
atggcgcggt ccatcgctag cggcttgatc cgccagaagc ggcaggcgcg 50  
ggagcagcac tgggaccggc cgtctgccag caggaggcgg agcagcccca 100  
gcaagaaccg cgggctctgc aacggcaacc tggtgatata ctctctccaa 150  
gtgcgcattc tcggcctcaa gaagcgagc ttgcggcgcc aagatcccca 200  
gctcaagggt atagtacca ggttatattg caggcaagc tactacttgc 250  
aaatgcacc ccatggagct ctcatggaa ccaaggatga cagcactaat 300  
tctacactct tcaacctcat accagtggga ctactgttg ttgccatcca 350  
gggagtgaac acagggttgt atatagccat gaatggagaa ggttacctct 400  
acccatcaga actttttacc cctgaatgca agtttaaaga atctgttttt 450  
gaaaattatt atgtaatac ctcattccat ttgtacagac aacaggaata 500  
tggtagagcc tggtttttgg gattaaataa ggaaggcgaa gctatgaaag 550  
ggaacagagt aaagaaaacc aaaccagcag ctcatcttct acccaagcca 600  
ttggaagttg ccatgtaccg agaaccatct ttgcatgatg ttggggaaac 650  
ggtcccgaag cctggggtga cgccaagtaa aagcacaagt gcgtctgcga 700  
taatgaatgg aggcaaacca gtcaacaaga gtaagacaac atag 744

<210> 499  
<211> 247  
<212> PRT  
<213> Homo Sapien

<400> 499  
Met Ala Ala Ala Ile Ala Ser Gly Leu Ile Arg Gln Lys Arg Gln 15  
1 5 10  
Ala Arg Glu Gln His Trp Asp Arg Pro Ser Ala Ser Arg Arg Arg 30  
20 25 30  
Ser Ser Pro Ser Lys Asn Arg Gly Leu Cys Asn Gly Asn Leu Val 45  
35 40 45  
Asp Ile Phe Ser Lys Val Arg Ile Phe Gly Leu Lys Lys Arg Arg 60  
50 55 60  
Leu Arg Arg Gln Asp Pro Gln Leu Lys Gly Ile Val Thr Arg Leu 75  
65 70 75  
Tyr Cys Arg Gln Gly Tyr Tyr Leu Gln Met His Pro Asp Gly Ala 90  
80 85 90  
Leu Asp Gly Thr Lys Asp Asp Ser Thr Asn Ser Thr Leu Phe Asn 105  
95 100 105  
Leu Ile Pro Val Gly Leu Arg Val Val Ala Ile Gln Gly Val Lys 120  
110 115 120

Thr Gly Leu Tyr Ile Ala Met Asn Gly Glu Gly Tyr Leu Tyr Pro  
 125 130  
 Ser Glu Leu Phe Thr Pro Glu Cys Lys Phe Lys Glu Ser Val Phe  
 140 145 150  
 Glu Asn Tyr Tyr Val Ile Tyr Ser Ser Met Leu Tyr Arg Gln Gln  
 155 160 165  
 Glu Ser Gly Arg Ala Trp Phe Leu Gly Leu Asn Lys Glu Gly Gln  
 170 175 180  
 Ala Met Lys Gly Asn Arg Val Lys Lys Thr Lys Pro Ala Ala His  
 185 190 195  
 Phe Leu Pro Lys Pro Leu Glu Val Ala Met Tyr Arg Glu Pro Ser  
 200 205 210  
 Leu His Asp Val Gly Glu Thr Val Pro Lys Pro Gly Val Thr Pro  
 215 220 225  
 Ser Lys Ser Thr Ser Ala Ser Ala Ile Met Asn Gly Gly Lys Pro  
 230 235 240  
 Val Asn Lys Ser Lys Thr Thr  
 245

<210> 500  
 <211> 2906  
 <212> DNA  
 <213> Homo Sapien

<400> 500  
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 ggctgtgtggg tgccttgcaa aaatgaagga tgcaggacgc agctttotcc 100  
 tggaaccgaa cgcaatggat aaactgattg tgcaagagag aaggaagaac 150  
 gaagcttttt cttgtgagcc ctggatctta acacaaatgt gtatatgtgc 200  
 acacagggag cattcaagaa tgaataaac cagagttaga cccgcggggg 250  
 ttgtgtgtgt ctgacataaa taaataatct taaagcagct gttccctccc 300  
 ccaccccca aaaaaaggat gattggaat gaagaaccga ggattcaca 350  
 agaaaaaagt atgttcattt ttctctataa aggagaaagt gagccaagga 400  
 gatatttttg gaatgaaaag ttgggggctt ttttagttaa gtaagaact 450  
 ggtgtgtgtg tgttttctct tctttttgaa tttcccacaa gaggagagga 500  
 aattaataat acatctgcaa agaaatttca gagaagaaaa gttgaccgcg 550  
 gcagattgag gcattgattg ggggagagaa accagcagag cacagtggga 600  
 tttgtgccta tgttgactaa aattgacgga taattgcagt tggatttttc 650  
 ttcatcaacc tctttttttt taaattttta ttccttttgg tatcaagatc 700  
 atgcgttttc tctgttctt aaccacctgg atttccatct ggatgttgct 750

gtgatcagtc tgaatacaaa ctgtttgaat tocagaagga ccaacaccag 800  
 ataaattatg aatgttgaa aagatgacct tacatccaca gcagataatg 850  
 ataggctcta ggtttaacag ggccctatct gacccctgcg tctgtgtgct 900  
 gctggctctt caacttcttg tgggtgctgg tctggcgcg gctcagacct 950  
 gccctctctg gtgctcctgc agcaaccagt tcagcaaggt gatttgtgtt 1000  
 cggaaaaaac tgcgtgaggt tcoggatggc atctccacca acacacggct 1050  
 gctgaacctc catgagaacc aaatccagat catcaaagt aacagcttca 1100  
 agcacttgag gcacttgaa atcctacagt tgagttagaa ccatatcaga 1150  
 accattgaaa ttggggcttt caatggtctg gcgaacctca acactctgga 1200  
 actcttgac aatgctctta ctaccatccc gaatggagct tttgtatact 1250  
 tgtctaaact gaaggagctc tgggtgcgaa acaacccact tgaagcctc 1300  
 ccttcttatg cttttaacag aattccttct ttgcgcgcag tagacttagg 1350  
 ggaattgaaa agactttcat acatctcaga aggtgccttt gaaggctctg 1400  
 ccaacttgag gtatttgaa cttgccatgt gcaaccttcg ggaaatccct 1450  
 aacctcacac cgtcctataa actagatgag ctggatcttt ctgggaatca 1500  
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 aactgtgat gatacagtc cagattcaag tgattgaac gaatgccttt 1600  
 gacaacctc agtcactagt ggagatcaac ctggcacaca ataactaac 1650  
 attactgcct catgacctc tcaactccct gcacatcta gagcgatac 1700  
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 taacactcct ccaatctaa aggggaggtta cattggagag ctgcagcaga 1850  
 attactcac atgctatgct ccggtgatg tggagcccc tgcagacctc 1900  
 aatgtcactg aaggcatggc agctgagctg aaatgtcggg cctccacatc 1950  
 cctgacatct gtatcttgga ttactccaaa tggaaacatc atgacacatg 2000  
 gggcgataca agtcgggata gctgtgctca gtgatggtac gttaaatttc 2050  
 acaaatgtaa ctgtgcaaga tacaggcatg tacacatgta tggtgagtaa 2100  
 ttcogttggg aatactactg cttcagccac cctgaatgtt actgcagcaa 2150  
 ccaactactc tttctcttac ttttcaaccg tcacagtaga gactatggaa 2200  
 ccgtctcagg atgaggcacg gaccacagat aacaatgtgg gtcccaactc 2250  
 agtggcgac tgggagacca ccaatgtgac cactctctc acaccacaga 2300  
 gcacaaggtc gacagagaaa accttcacca tccagtgac tgatataaac 2350

agtggggtacc caggaattga tgaggtcatg aagactacca aaatcatcat 2400  
 tgggtgtttt gtggccatca cactcatggc tgacgtgatg ctggtcattt 2450  
 tctacaagat gaggaagcag caccatcggc aaaacatca cgccccaaca 2500  
 aggactgttg aaattattaa tgtggatgat gagattacgg gagacacacc 2550  
 catggaaaagc cacctgcccc tgccctgtat cgagcatgag cacctaatac 2600  
 actataactc atacaaatct cccttcaacc acacaacaac agttaacaca 2650  
 ataaattcaa tacacagttc agtgcgatgaa cgtttattga tccgaatgaa 2700  
 ctctaagac aatgtacaag agactcaaat ctaaaacatt tacagagtta 2750  
 caaaaaacaa acaatcaaaa aaaaagacag ttattataaa atgacacaaa 2800  
 tgactgggct aaatctactg tttaaaaaaa gtgtctttac aaaaaaacaa 2850  
 aaaagaaaag aaattttatt attaaaaatt ctattgtgat ctaaagcaga 2900  
 caaaaa 2906

<210> 501  
 <211> 640  
 <212> PRT  
 <213> Homo Sapien

<400> 501  
 Met Leu Asn Lys Met Thr Leu His Pro Gln Gln Ile Met Ile Gly  
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 Pro Arg Phe Asn Arg Ala Leu Phe Asp Pro Leu Leu Val Val Leu  
 20 25 30  
 Leu Ala Leu Gln Leu Leu Val Val Ala Gly Leu Val Arg Ala Gln  
 35 40 45  
 Thr Cys Pro Ser Val Cys Ser Cys Ser Asn Gln Phe Ser Lys Val  
 50 55 60  
 Ile Cys Val Arg Lys Asn Leu Arg Glu Val Pro Asp Gly Ile Ser  
 65 70 75  
 Thr Asn Thr Arg Leu Leu Asn Leu His Glu Asn Gln Ile Gln Ile  
 80 85 90  
 Ile Lys Val Asn Ser Phe Lys His Leu Arg His Leu Glu Ile Leu  
 95 100 105  
 Gln Leu Ser Arg Asn His Ile Arg Thr Ile Glu Ile Gly Ala Phe  
 110 115 120  
 Asn Gly Leu Ala Asn Leu Asn Thr Leu Glu Leu Phe Asp Asn Arg  
 125 130 135  
 Leu Thr Thr Ile Pro Asn Gly Ala Phe Val Tyr Leu Ser Lys Leu  
 140 145 150  
 Lys Glu Leu Trp Leu Arg Asn Asn Pro Ile Glu Ser Ile Pro Ser  
 155 160 165

Tyr	Ala	Phe	Asn	Arg	Ile	Pro	Ser	Leu	Arg	Arg	Leu	Asp	Leu	Gly	170	175	180
Glu	Leu	Lys	Arg	Leu	Ser	Tyr	Ile	Ser	Glu	Gly	Ala	Phe	Glu	Gly	185	190	195
Leu	Ser	Asn	Leu	Arg	Tyr	Leu	Asn	Leu	Ala	Met	Cys	Asn	Leu	Arg	200	205	210
Glu	Ile	Pro	Asn	Leu	Thr	Pro	Leu	Ile	Lys	Leu	Asp	Glu	Leu	Asp	215	220	225
Leu	Ser	Gly	Asn	His	Leu	Ser	Ala	Ile	Arg	Pro	Gly	Ser	Phe	Gln	230	235	240
Gly	Leu	Met	His	Leu	Gln	Lys	Leu	Trp	Met	Ile	Gln	Ser	Gln	Ile	245	250	255
Gln	Val	Ile	Glu	Arg	Asn	Ala	Phe	Asp	Asn	Leu	Gln	Ser	Leu	Val	260	265	270
Glu	Ile	Asn	Leu	Ala	His	Asn	Asn	Leu	Thr	Leu	Leu	Pro	His	Asp	275	280	285
Leu	Phe	Thr	Pro	Leu	His	His	Leu	Glu	Arg	Ile	His	Leu	His	His	290	295	300
Asn	Pro	Trp	Asn	Cys	Asn	Cys	Asp	Ile	Leu	Trp	Leu	Ser	Trp	Trp	305	310	315
Ile	Lys	Asp	Met	Ala	Pro	Ser	Asn	Thr	Ala	Cys	Cys	Ala	Arg	Cys	320	325	330
Asn	Thr	Pro	Pro	Asn	Leu	Lys	Gly	Arg	Tyr	Ile	Gly	Glu	Leu	Asp	335	340	345
Gln	Asn	Tyr	Phe	Thr	Cys	Tyr	Ala	Pro	Val	Ile	Val	Glu	Pro	Pro	350	355	360
Ala	Asp	Leu	Asn	Val	Thr	Glu	Gly	Met	Ala	Ala	Glu	Leu	Lys	Cys	365	370	375
Arg	Ala	Ser	Thr	Ser	Leu	Thr	Ser	Val	Ser	Trp	Ile	Thr	Pro	Asn	380	385	390
Gly	Thr	Val	Met	Thr	His	Gly	Ala	Tyr	Lys	Val	Arg	Ile	Ala	Val	395	400	405
Leu	Ser	Asp	Gly	Thr	Leu	Asn	Phe	Thr	Asn	Val	Thr	Val	Gln	Asp	410	415	420
Thr	Gly	Met	Tyr	Thr	Cys	Met	Val	Ser	Asn	Ser	Val	Gly	Asn	Thr	425	430	435
Thr	Ala	Ser	Ala	Thr	Leu	Asn	Val	Thr	Ala	Ala	Thr	Thr	Thr	Pro	440	445	450
Phe	Ser	Tyr	Phe	Ser	Thr	Val	Thr	Val	Glu	Thr	Met	Glu	Pro	Ser	455	460	465
Gln	Asp	Glu	Ala	Arg	Thr	Thr	Asp	Asn	Asn	Val	Gly	Pro	Thr	Pro	470	475	480



Val Val Asp Trp Glu Thr Thr Asn Val Thr Thr Ser Leu Thr Pro  
485 490 495

Gln Ser Thr Arg Ser Thr Glu Lys Thr Phe Thr Ile Pro Val Thr  
500 505 510

Asp Ile Asn Ser Gly Ile Pro Gly Ile Asp Glu Val Met Lys Thr  
515 520 525

Thr Lys Ile Ile Ile Gly Cys Phe Val Ala Ile Thr Leu Met Ala  
530 535 540

Ala Val Met Leu Val Ile Phe Tyr Lys Met Arg Lys Gln His His  
545 550 555

Arg Gln Asn His His Ala Pro Thr Arg Thr Val Glu Ile Ile Asn  
560 565 570

Val Asp Asp Glu Ile Thr Gly Asp Thr Pro Met Glu Ser His Leu  
575 580 585

Pro Met Pro Ala Ile Glu His Glu His Leu Asn His Tyr Asn Ser  
590 595 600

Tyr Lys Ser Pro Phe Asn His Thr Thr Thr Val Asn Thr Ile Asn  
605 610 615

Ser Ile His Ser Ser Val His Glu Pro Leu Leu Ile Arg Met Asn  
620 625 630

Ser Lys Asp Asn Val Gln Glu Thr Gln Ile  
635 640

<210> 502

<211> 2458

<212> DNA

<213> Homo Sapien

<400> 502

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cgcccgccac atggctgcag ccacctcgcg cgcaccccca ggcgcgcgcg 100

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agcaactgag cggggaagcg cccgcgtccg ggatcggga tgtccctcct 200

ccttctctc tttgctagttt cctactatgt tggaaacctg gggactcaca 250

ctgagatcaa gagagtggca gaggaaaagg tcactttgcc ctgccaccat 300

caactggggc ttccagaaaa agacactctg gatattgaat ggtgctcac 350

cgataatgaa gggaacaaaa aagtgggtgat cacttactcc agtcgtcatg 400

tctacaataa cttgactgag gaacagaagg gccgagtggc ctttgcttcc 450

aatttctcgg caggagatgc ctccctgcag attgaacctc tgaagcccag 500

tgatgagggc cggtagacct gtaagggtta gaattcaggc cgctacgtgt 550

ggagccatgt catcttaaaa gtcttagtga gaccatccaa gcccaagtgt 600

gagttggaag gagagctgac agaaggaagt gacctgactt tgcagtgtga 650  
 gtcatcctct ggcacagagc ccattgtgta ttactggcag cgaatccgag 700  
 agaaagaggg agaggatgaa cgtctgcctc ccaaactctag gattgtactac 750  
 aaccaccctg gacgagtctt gctgcagaat cttaccatgt cctactctgg 800  
 actgtaccag tgcacagcag gcaacgaagc tgggaaggaa agctgtgtgg 850  
 tgcgagtaac tgtacagtat gtacaaagca tcggcatggt tgcaggagca 900  
 gtgacaggca tagtggctgg agccctgctg attttctct tgggtgtggct 950  
 gctaaccga aggaagaca aagaagata tgaggagaa gagagacct 1000  
 atgaaattcg agaagatgct gaagctccaa aagccctgt tgtgaaaccc 1050  
 agtcctctt cctcaggctc toggagctca cgtctgtgtt ctctctccac 1100  
 tcgtccaca gcaaatagtg cctcacgcag ccagcggaca ctgtcaactg 1150  
 acgcagcacc ccagccaggg ctggccacc aggcatcac cctagtgggg 1200  
 ccagagtgga gaggttctga accaaagaaa gtccaccatg ctaatctgac 1250  
 caaagcagaa accacaccca gcatgatccc cagccagagc agagccttcc 1300  
 aaacggtctg aattacaatg gacttgactc ccacgcttcc ctaggagtca 1350  
 gggctcttgg actcttctcg tcattggagc tcaagtcacc agccacacaa 1400  
 ccagatgaga ggtcatctaa gtagcagtga gcattgcacg gaacagattc 1450  
 agatgagcat ttctcttata caataccaaa caagcaaaag gatgtaagct 1500  
 gattcatctg taaaaagca tcttattgtg ctttagacc agagtaaggg 1550  
 aaagcaggag tccaaatcta tttgttgacc aggacctgtg gtgagaaggt 1600  
 tggggaaaag tgaggtgaat atacctaaa cttttaatgt gggatatatt 1650  
 gtatcagtgc ttgtattcac aattttcaag aggaaatggg atgctgtttg 1700  
 taaattttct atgcatttct gcaaaactat tggattatta gttattcaga 1750  
 cagtcaagca gaaccacag cttattaca cctgtctaca ccatgtactg 1800  
 agctaaccac ttctaagaaa ctccaaaaa ggaacatgt gtcttctatt 1850  
 ctgacttaac ttcatattgc ataaggtttg gatattaatt tcaaggggag 1900  
 ttgaaatagt gggagatgga gaagagtga tgagtctct cactctata 1950  
 ctaatctcac tattgtatt gagcccaaaa taactatgaa aggagacaaa 2000  
 aatttgtgac aaaggattgt gaagagcttt ccatcttcat gatgttatga 2050  
 ggattgttga caaacattag aaatatataa tggagcaatt gtggatttcc 2100  
 cctcaaatca gatgcctcta aggactttcc tgctagatat ttctggaagg 2150  
 agaaaataca acatgtcatt tatcaacgtc cttagaaga attcttctag 2200

agaaaaaggg atctaggaat gctgaaagat tacccaacat accattatag 2250  
 tctctctctt ctgagaaaa gtgaaaccag aattgcaaga ctgggtggac 2300  
 tagaaagga gattagatca gttttctctt aatatgtcaa ggaaggtagc 2350  
 cgggcatggt gccaggcacc ttaggaaaaa tcagcaggt ggaggttgca 2400  
 gtgagccgag attatgccat tgcactccag cctgggtgac agagcgggac 2450  
 tccgtctc 2458

<210> 503  
 <211> 373  
 <212> PRT  
 <213> Homo Sapien

<400> 503  
 Met Ser Leu Leu Leu Leu Leu Leu Val Ser Tyr Tyr Val Gly  
 1 5 10 15  
 Thr Leu Gly Thr His Thr Glu Ile Lys Arg Val Ala Glu Glu Lys  
 20 25 30  
 Val Thr Leu Pro Cys His His Gln Leu Gly Leu Pro Glu Lys Asp  
 35 40 45  
 Thr Leu Asp Ile Glu Trp Leu Leu Thr Asp Asn Glu Gly Asn Gln  
 50 55 60  
 Lys Val Val Ile Thr Tyr Ser Ser Arg His Val Tyr Asn Asn Leu  
 65 70 75  
 Thr Glu Glu Gln Lys Gly Arg Val Ala Phe Ala Ser Asn Phe Leu  
 80 85 90  
 Ala Gly Asp Ala Ser Leu Gln Ile Glu Pro Leu Lys Pro Ser Asp  
 95 100 105  
 Glu Gly Arg Tyr Thr Cys Lys Val Lys Asn Ser Gly Arg Tyr Val  
 110 115 120  
 Trp Ser His Val Ile Leu Lys Val Leu Val Arg Pro Ser Lys Pro  
 125 130 135  
 Lys Cys Glu Leu Glu Gly Glu Leu Thr Glu Gly Ser Asp Leu Thr  
 140 145 150  
 Leu Gln Cys Glu Ser Ser Ser Gly Thr Glu Pro Ile Val Tyr Tyr  
 155 160 165  
 Trp Gln Arg Ile Arg Glu Lys Glu Gly Glu Asp Glu Arg Leu Pro  
 170 175 180  
 Pro Lys Ser Arg Ile Asp Tyr Asn His Pro Gly Arg Val Leu Leu  
 185 190 195  
 Gln Asn Leu Thr Met Ser Tyr Ser Gly Leu Tyr Gln Cys Thr Ala  
 200 205 210  
 Gly Asn Glu Ala Gly Lys Glu Ser Cys Val Val Arg Val Thr Val  
 215 220 225

Gln Tyr Val Gln Ser Ile Gly Met Val	Ala Gly Ala Val Thr Gly
230	235
Ile Val Ala Gly Ala Leu Leu Ile Phe	Leu Leu Val Trp Leu Leu
245	250
Ile Arg Arg Lys Asp Lys Glu Arg Tyr	Glu Glu Glu Glu Arg Pro
260	265
Asn Glu Ile Arg Glu Asp Ala Glu Ala	Pro Lys Ala Arg Leu Val
275	280
Lys Pro Ser Ser Ser Ser Ser Gly Ser	Arg Ser Ser Arg Ser Gly
290	295
Ser Ser Ser Thr Arg Ser Thr Ala Asn	Ser Ala Ser Arg Ser Gln
305	310
Arg Thr Leu Ser Thr Asp Ala Ala Pro	Gln Pro Gly Leu Ala Thr
320	325
Gln Ala Tyr Ser Leu Val Gly Pro Glu	Val Arg Gly Ser Glu Pro
335	340
Lys Lys Val His His Ala Asn Leu Thr	Lys Ala Glu Thr Thr Pro
350	355
Ser Met Ile Pro Ser Gln Ser Arg Ala	Phe Gln Thr Val
365	370

<210> 504  
 <211> 3060  
 <212> DNA  
 <213> Homo Sapien

<400> 504  
 cgcgaggcgc ggggagcctg ggaccaggag cgagagccgc ctacctgcag 50  
 ccgcgcgccca cggcacggca gccaccatgg cgctcctgct gtgcttcgtg 100  
 ctctctgtgcg gagtagtggg ttctgccaga agtttgagta tcaactactcc 150  
 tgaagagatg attgaaaaag ccaaagggga aactgcctat ctgccatgca 200  
 aatttaacgt tagtccccga gaccaggggac cgctggacat cgagtggctg 250  
 atatcaccag ctgataatca gaaggtggat caagtgatta ttttatattc 300  
 tggagacaaa atttatgatg actactatcc agatctgaaa ggcgagtgac 350  
 attttaacag taatgatctc aaatctgggtg atgcatcaat aaatgtaaac 400  
 aatttacaac tgtoagatat tggcacatat cagtgcacaa tgaaaaaagc 450  
 tcctgtgtgt gcaaataaga agattoatct ggtagttcct gttaagcctt 500  
 caggtgctgag atgttacgtt gatggatctg aagaaattgg aagtgaactt 550  
 aagataaaat gtgaacaaa agaaggttca cttccattac agtatgagtg 600  
 gcaaaaattg tctgactcac agaaaatgcc cacttcatgg ttagcagaaa 650  
 tgacttcato tgttatatct gtaaaaaatg cctcttctga gtactctggg 700

acatacagct gtacagtcag aaacagagtg ggctctgac agtgccctgt 750  
 gcgtctaacc gtgtccctc ctcaataa agctggacta attgcaggag 800  
 ccattatagg aactttgtct gctctagcgc tcattggctc tatcatcttt 850  
 tgctgtcgta aaaagcgag agaagaaaaa tatgaaaagg aagtcatca 900  
 cgatacagg gaagatgtgc caccctcaaa gagccgtacg tccactgcc 950  
 gaagctacat cggcagtaat cattcatccc tgggggtccat gtctccttcc 1000  
 aacatggaag gatattccaa gactcagtat aaccaagtac caagtgaaga 1050  
 ctttgaacgc actcctcaga gtccgactct cccacctgct aagtccaagt 1100  
 acccttaca gactgatgga attacagttg tataaatatg gactactgaa 1150  
 gaatctgaag tattgtatta ttgacttta ttttaggctc ctagttaa 1200  
 cttaaatgtt ttttaaaaa agcacaaggc acagagatta ggcagctgt 1250  
 aagaacacat ctactttatg caatggcatt agacatgtaa gtcagatgtc 1300  
 atgtcaaaat tagtacgagc caaatctctt gttaaaaaa cctatgtata 1350  
 gtgacactga tagttaaag atgttttatt atattttcaa taactaccac 1400  
 taacaaattt ttaacttttc atatgcata tctgatatgt ggtcttttag 1450  
 gaaaagtatg gttaaatgtt gatttttcaa aggaatttt aaaattctta 1500  
 cgttctgttt aatgtttttg ctattttagt aaatacattg aagggaaaaa 1550  
 ccggttcttt tcccttttta tgcacacaac agaaacagcg gttgtcatgc 1600  
 ctcaaaactat tttttatttg caactacatg atttcacaca attctcttaa 1650  
 acaacgacat aaaatagatt tccttgtata taaataactt acatacgtc 1700  
 cataaagtaa atttctcaa ggtctagaac aaatcgtcca ctctacagt 1750  
 gttctcgtat ccaacagagt tgatgcaca tatataaata ctcaagtcca 1800  
 atattaaaaa cttaggcact tgactaactt taataaaatt tctcaaaata 1850  
 tatcaatc taaagtgc atatttttta agaaagatta tctcaataa 1900  
 ctctataaa aataagtttg atggtttggc ccatctaact tcactactat 1950  
 tagtaagaac ttttaacttt taatgtgtag taaggtttat tctacctttt 2000  
 tctcaacatg acaccaacac aatcaaaaac gaagttagtg aggtgctaac 2050  
 atgtgaggat taatccagtg attccggtca caatgcattc caggaggagg 2100  
 taccocatgc actggaattg ggcgatatgg tttatttttt ctccctgat 2150  
 ttggataacc aaatggaaca ggaggaggat agtgattctg atggccattc 2200  
 cctcgataca ttctggctt tttctgggc aaagggtgcc acattggaag 2250  
 aggtggaat ataagttctg aaatctgtag ggaagagaac acattaagtt 2300

aattcaaaagg aaaaaatcat catctatggt ccagattttct cattaaagac 2350  
aaagttaccc acaacactga gatcacatct aagtgacact cctattgtca 2400  
ggtctaaata cattaanaac ctcatgtgta ataggcggtat aatgtataac 2450  
aggtgaccaa tgtttttctga atgcataaag aaatgaataa actcaaacac 2500  
agtacttctt aaacaacttc aaccataaaa gaccataaaca tggaacgaat 2550  
ggaagcttgt aaggacatgc ttgttttagt ccagtggttt ccacagctgg 2600  
ctaagccagg agtcacttgg aggcctttta atacataaaca ttggagctgg 2650  
aggccattat ccttagcaaa ctaatgcaga aacagaaaaa caactaccgc 2700  
atgttctcgc ttataagtgg gaggtaatga taagaactta tgaaacacaa 2750  
gaaggaaaca atagacattg gagtctatgt gagagggggag ggtggggaga 2800  
ggaaaaggag cagaaaaagat aactattgag tactgccttc acacctgggt 2850  
gatgaaataa tatgtacaac aaatccctgt gacacatggt tacctatgga 2900  
acaaaccttc atgtgtatcc ctaaacctaa aataaaagtt aaaaaaaaaa 2950  
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 3000  
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 3050  
aaaaaaaaaa 3060

<210> 505  
<211> 352  
<212> PRT  
<213> Homo Sapien

<400> 505  
Met Ala Leu Leu Leu Cys Phe Val Leu Leu Cys Gly Val Val Asp  
1 5 10 15  
Phe Ala Arg Ser Leu Ser Ile Thr Thr Pro Glu Glu Met Ile Glu  
20 25 30  
Lys Ala Lys Gly Glu Thr Ala Tyr Leu Pro Cys Lys Phe Thr Leu  
35 40 45  
Ser Pro Glu Asp Gln Gly Pro Leu Asp Ile Glu Trp Leu Ile Ser  
50 55 60  
Pro Ala Asp Asn Gln Lys Val Asp Gln Val Ile Ile Leu Tyr Ser  
65 70 75  
Gly Asp Lys Ile Tyr Asp Asp Tyr Tyr Pro Asp Leu Lys Gly Arg  
80 85 90  
Val His Phe Thr Ser Asn Asp Leu Lys Ser Gly Asp Ala Ser Ile  
95 100 105  
Asn Val Thr Asn Leu Gln Leu Ser Asp Ile Gly Thr Tyr Gln Cys  
110 115 120  
Lys Val Lys Lys Ala Pro Gly Val Ala Asn Lys Lys Ile His Leu

	125		130		135
Val Val Leu Val	Lys Pro Ser Gly Ala	Arg Cys Tyr Val Asp	Gly		
	140	145	150		
Ser Glu Glu Ile	Gly Ser Asp Phe Lys	Ile Lys Cys Glu Pro Lys			
	155	160	165		
Glu Gly Ser Leu	Pro Leu Gln Tyr Glu	Trp Gln Lys Leu Ser Asp			
	170	175	180		
Ser Gln Lys Met	Pro Thr Ser Trp Leu	Ala Glu Met Thr Ser Ser			
	185	190	195		
Val Ile Ser Val	Lys Asn Ala Ser Ser	Glu Tyr Ser Gly Thr Tyr			
	200	205	210		
Ser Cys Thr Val	Arg Asn Arg Val Gly	Ser Asp Gln Cys Leu Leu			
	215	220	225		
Arg Leu Asn Val	Val Pro Pro Ser Asn	Lys Ala Gly Leu Ile Ala			
	230	235	240		
Gly Ala Ile Ile	Gly Thr Leu Leu Ala	Leu Ala Leu Ile Gly Leu			
	245	250	255		
Ile Ile Phe Cys	Cys Arg Lys Lys Arg	Arg Glu Glu Lys Tyr Glu			
	260	265	270		
Lys Glu Val His	His Asp Ile Arg Glu	Asp Val Pro Pro Pro Lys			
	275	280	285		
Ser Arg Thr Ser	Thr Ala Arg Ser Tyr	Ile Gly Ser Asn His Ser			
	290	295	300		
Ser Leu Gly Ser	Met Ser Pro Ser Asn	Met Glu Gly Tyr Ser Lys			
	305	310	315		
Thr Gln Tyr Asn	Gln Val Pro Ser Glu	Asp Phe Glu Arg Thr Pro			
	320	325	330		
Gln Ser Pro Thr	Leu Pro Pro Ala Lys	Phe Lys Tyr Pro Tyr Lys			
	335	340	345		
Thr Asp Gly Ile	Thr Val Val				
	350				

<210> 506  
 <211> 1705  
 <212> DNA  
 <213> Homo Sapien

<400> 506  
 tgaaatgact tccacggctg ggacgggaac cttccacca cagctatgcc 50  
 tctgattggt gaatggtgaa ggtgcctgtc taacttttct gtaaaaagaa 100  
 ccagctgcct ccaggcagcc agccctcaag catcacttac aggaccagag 150  
 ggacaagaca tgactgtgat gaggagctgc ttctgccaat ttaacaccaa 200  
 gaagaattga ggctgcttgg gaggaaggcc aggaggaaca cgagactgag 250

agatgaattt tcaacagagg ctgcaaagcc tgtggacttt agccagaccc 300  
 ttctgccctc ctttctgtgc gacagcctct caaatgcaga tggttgtgct 350  
 cccttgccctg gggttttacc tgcttctctg gagccaggta tcagggggccc 400  
 agggccaaga attccacttt gggccctgcc aagtgaaggg ggttgttccc 450  
 cagaaactgt ggaagacett ctgggctgtg aaagacacta tgcaagctca 500  
 ggataacatc acgagtgccc ggctgctgca gcaggagggt ctgcagaagc 550  
 tctcggatgc tgagagctgt taccttgtcc acacctgct ggagttctac 600  
 ttgaaaactg ttttcaaaaa ccaccacaat agaacagttg aagtcaggac 650  
 tctgaagtea ttctctactc tggccaacaa ctttgttctc atcgtgtcac 700  
 aactgcaacc cagtcaagaa aatgagatgt tttccatcag agcagtgca 750  
 cacaggcggt ttctgtatt ccggagagca ttcaaacagt tggacgtaga 800  
 agcagctctg accaaagccc ttggggaagt ggacattctt ctgacctgga 850  
 tgcaaaaatt ctacaagctc tgaatgtcta gaccaggacc tccctcccc 900  
 tggcactggt ttgttccctg tgtcatttca aacagtctcc ctccctatgc 950  
 tgttcaactg acacttcacg cccttgcca tgggtcccat tcttgccca 1000  
 ggattattgt caaagaagtc attctttaag cagcgccagt gacagtcagg 1050  
 gaagtgctct ctggatgctg tgaagagtct acagagaaga ttcttgtatt 1100  
 tattacaact ctatttaatt aatgtcagta ttcaactga agttctattt 1150  
 atttgtgaga ctgtaagta catgaaggca gcagaatatt gtgccccatg 1200  
 cttctttacc cctcacaatc cttgccacag tgtggggcag tggatgggtg 1250  
 cttagtaagt acttaataaa ctgtggtgct ttttttgccc tgtctttgga 1300  
 ttgttaaaaa acagagaggg atgcttggtat gtaaaactga acttcagagc 1350  
 atgaaaatca cactgtcttc tgatatctgc agggacagag cattgggggtg 1400  
 ggggtaagggt gcatctgttt gaaaagtaaa cgataaaatg tggattaaag 1450  
 tgcccagcac aaagcagatc ctcaataaac atttcatttc ccccccacac 1500  
 tgcagagctc accccatcat ccccttccct tgggtgccctc cttttttttt 1550  
 tatccatgct attcttccct aatcttcac ttgagtgtca agctgacctt 1600  
 gctgatggtg acattgcacc tggatgtact atccaatctg tgatgacatt 1650  
 ccctgctaataaaaagacaac ataactccaa aaaaaaaaaa aaaaaaaaaa 1700  
 aaaaa 1705

<210> 507  
 <211> 206  
 <212> PRT



<213> Homo Sapien

<400> 507

Met	Asn	Phe	Gln	Gln	Arg	Leu	Gln	Ser	Leu	Trp	Thr	Leu	Ala	Arg
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Pro	Phe	Cys	Pro	Pro	Leu	Leu	Ala	Thr	Ala	Ser	Gln	Met	Gln	Met
				20					25					30
Val	Val	Leu	Pro	Cys	Leu	Gly	Phe	Thr	Leu	Leu	Leu	Trp	Ser	Gln
				35					40					45
Val	Ser	Gly	Ala	Gln	Gly	Gln	Glu	Phe	His	Phe	Gly	Pro	Cys	Gln
				50					55					60
Val	Lys	Gly	Val	Val	Pro	Gln	Lys	Leu	Trp	Glu	Ala	Phe	Trp	Ala
				65					70					75
Val	Lys	Asp	Thr	Met	Gln	Ala	Gln	Asp	Asn	Ile	Thr	Ser	Ala	Arg
				80					85					90
Leu	Leu	Gln	Gln	Glu	Val	Leu	Gln	Asn	Val	Ser	Asp	Ala	Glu	Ser
				95					100					105
Cys	Tyr	Leu	Val	His	Thr	Leu	Leu	Glu	Phe	Tyr	Leu	Lys	Thr	Val
				110					115					120
Phe	Lys	Asn	His	His	Asn	Arg	Thr	Val	Glu	Val	Arg	Thr	Leu	Lys
				125					130					135
Ser	Phe	Ser	Thr	Leu	Ala	Asn	Asn	Phe	Val	Leu	Ile	Val	Ser	Gln
				140					145					150
Leu	Gln	Pro	Ser	Gln	Glu	Asn	Glu	Met	Phe	Ser	Ile	Arg	Asp	Ser
				155					160					165
Ala	His	Arg	Arg	Phe	Leu	Leu	Phe	Arg	Arg	Ala	Phe	Lys	Gln	Leu
				170					175					180
Asp	Val	Glu	Ala	Ala	Leu	Thr	Lys	Ala	Leu	Gly	Glu	Val	Asp	Ile
				185					190					195
Leu	Leu	Thr	Trp	Met	Gln	Lys	Phe	Tyr	Lys	Leu				
				200					205					

<210> 508

<211> 924

<212> DNA

<213> Homo Sapien

<400> 508

aaggagcagc ccgcaagcac caagtgcgag gcatgaagtt acagtgtggt 50  
tccctttggc tctctgggtac aatactgata ttgtgctcag tagacaacca 100  
cgggtctcagg agatgtctga ttccacaga catgcaccat atagaagaga 150  
gtttccaaga aatcaaaaga gccatccaag ctaaggacac cttccaaat 200  
gtcactatcc tgtccacatt ggagactctg cagatcatta agcccttaga 250  
tgtgtgctgc gtgaccaaga acctcctggc gttctacgtg gacagggtgt 300

tcaaggatca tcaggagcca aacccccaaaa tcttgagaaa aatcagcagc 350  
 attgecaact ctttctcta catgcagaaa actctgcggc aatgtcagga 400  
 acagaggcag tgtcactgca ggcaggagc caccaatgcc accagatgca 450  
 tccatgacaa ctatgatcag ctggaggctcc acgtgtgtgc cattaaatcc 500  
 ctgggagagc tcgacgtctt tctagcctgg attaataaga atcatgaagt 550  
 aatgttctca gcttgatgac aaggaacctg tatagtgtgc cagggatgaa 600  
 cccccctgt gcggtttact gtgggagaca gccaccttg aaggggaagg 650  
 agatggggaa ggccccctgc agctgaaagt cccactggct ggcctcaggc 700  
 tgtcttattc cgcttgaaaa taggcaaaaa gtctactgtg gtatttgtaa 750  
 taaacttat ctgctgaaag ggcctgcagg ccatcctggg agtaaagggc 800  
 tgccttccca totaatttat tgtaaagtcata tatagtcatt gtctgtgatg 850  
 tgagccaagt gatctcctgt agtacacatt gtactgagtg gtttttctga 900  
 ataaattcca tattttacct atga 924

<210> 509

<211> 177

<212> PRT

<213> Homo Sapien

<400> 509

Met	Lys	Leu	Gln	Cys	Val	Ser	Leu	Trp	Leu	Leu	Gly	Thr	Ile	Leu
1				5					10					15
Ile	Leu	Cys	Ser	Val	Asp	Asn	His	Gly	Leu	Arg	Arg	Cys	Leu	Ile
				20					25					30
Ser	Thr	Asp	Met	His	His	Ile	Glu	Glu	Ser	Phe	Gln	Glu	Ile	Lys
				35					40					45
Arg	Ala	Ile	Gln	Ala	Lys	Asp	Thr	Phe	Pro	Asn	Val	Thr	Ile	Leu
				50					55					60
Ser	Thr	Leu	Glu	Thr	Leu	Gln	Ile	Ile	Lys	Pro	Leu	Asp	Val	Cys
				65					70					75
Cys	Val	Thr	Lys	Asn	Leu	Leu	Ala	Phe	Tyr	Val	Asp	Arg	Val	Phe
				80					85					90
Lys	Asp	His	Gln	Glu	Pro	Asn	Pro	Lys	Ile	Leu	Arg	Lys	Ile	Ser
				95					100					105
Ser	Ile	Ala	Asn	Ser	Phe	Leu	Tyr	Met	Gln	Lys	Thr	Leu	Arg	Gln
				110					115					120
Cys	Gln	Glu	Gln	Arg	Gln	Cys	His	Cys	Arg	Gln	Glu	Ala	Thr	Asn
				125					130					135
Ala	Thr	Arg	Val	Ile	His	Asp	Asn	Tyr	Asp	Gln	Leu	Glu	Val	His
				140					145					150
Ala	Ala	Ala	Ile	Lys	Ser	Leu	Gly	Glu	Leu	Asp	Val	Phe	Leu	Ala

Trp Ile Asn Lys Asn His Glu Val Met Phe Ser Ala  
170 175

<210> 510  
<211> 996  
<212> DNA  
<213> Homo Sapien

<400> 510  
cccgtgccaa gaggtagcga agtaccgcct atagagtcta taggcccact 50  
tggtctcggt agaagcggcg tacaattaat acataacctt atgtatcata 100  
cacatacgat ttaggtgaca ctatagaata acatccactt tgcctttctc 150  
tccacaggtg tccactccca ggtccaactg cacctcggtt ctatcgataa 200  
tctcagcacc agccactcag agcaggggac gatgttgggg gcccgcccta 250  
ggctctgggt ctgtgccttg tgcagcgtct gcagcatgag cgtcctcaga 300  
gcctatccca atgcctcccc actgctcggc tccagctggg gtggcctgat 350  
ccacctgtac acagccacag ccaggaacag ctaccacctg cagatccaca 400  
agaatggcca tgtggatggc gcaccccatc agaccatcta cagtgccctg 450  
atgatcagat cagaggatgc tggctttgtg gtgattacag gtgtgatgag 500  
cagaagatac ctctgcatgg atttcagagg caacattttt ggatcacact 550  
atttcgacce ggagaactgc aggttccaac accagacgct ggaagacggg 600  
tacgacgtct accactctcc tcagtatcac ttctgggtca gtctggggcg 650  
ggcgaagaga gccttcctgc caggcatgaa cccaccccg gactccactg 700  
tcctgtcccg gaggaacgag atccccctaa ttcacttcaa ccccccata 750  
ccacggcggc acacccggag cgccgaggac gactcggagc gggacccctt 800  
gaacgtgctg aagccccggg ccgggatgac cccggccccg gcctcctgtt 850  
cacaggagct cccgagcgcc gaggacaaca gcccgatggc cagtgaacca 900  
ttaggggttg tcagggggcg tcgagtgaac acgcacgctg ggggaacggg 950  
cccggaaggc tgccgcccct tcgccaagtt catctagggt cgctgg 996

<210> 511  
<211> 251  
<212> PRT  
<213> Homo Sapien

<400> 511  
Met Leu Gly Ala Arg Leu Arg Leu Trp Val Cys Ala Leu Cys Ser  
1 5 10 15  
Val Cys Ser Met Ser Val Leu Arg Ala Tyr Pro Asn Ala Ser Pro  
20 25 30

Leu	Leu	Gly	Ser	Ser	Trp	Gly	Gly	Leu	Ile	His	Leu	Tyr	Thr	Ala	35	40	45
Thr	Ala	Arg	Asn	Ser	Tyr	His	Leu	Gln	Ile	His	Lys	Asn	Gly	His	50	55	60
Val	Asp	Gly	Ala	Pro	His	Gln	Thr	Ile	Tyr	Ser	Ala	Leu	Met	Ile	65	70	75
Arg	Ser	Glu	Asp	Ala	Gly	Phe	Val	Val	Ile	Thr	Gly	Val	Met	Ser	80	85	90
Arg	Arg	Tyr	Leu	Cys	Met	Asp	Phe	Arg	Gly	Asn	Ile	Phe	Gly	Ser	95	100	105
His	Tyr	Phe	Asp	Pro	Glu	Asn	Cys	Arg	Phe	Gln	His	Gln	Thr	Leu	110	115	120
Glu	Asn	Gly	Tyr	Asp	Val	Tyr	His	Ser	Pro	Gln	Tyr	His	Phe	Leu	125	130	135
Val	Ser	Leu	Gly	Arg	Ala	Lys	Arg	Ala	Phe	Leu	Pro	Gly	Met	Asn	140	145	150
Pro	Pro	Pro	Tyr	Ser	Gln	Phe	Leu	Ser	Arg	Arg	Asn	Glu	Ile	Pro	155	160	165
Leu	Ile	His	Phe	Asn	Thr	Pro	Ile	Pro	Arg	Arg	His	Thr	Arg	Ser	170	175	180
Ala	Glu	Asp	Asp	Ser	Glu	Arg	Asp	Pro	Leu	Asn	Val	Leu	Lys	Pro	185	190	195
Arg	Ala	Arg	Met	Thr	Pro	Ala	Pro	Ala	Ser	Cys	Ser	Gln	Glu	Leu	200	205	210
Pro	Ser	Ala	Glu	Asp	Asn	Ser	Pro	Met	Ala	Ser	Asp	Pro	Leu	Gly	215	220	225
Val	Val	Arg	Gly	Gly	Arg	Val	Asn	Thr	His	Ala	Gly	Gly	Thr	Gly	230	235	240
Pro	Glu	Gly	Cys	Arg	Pro	Phe	Ala	Lys	Phe	Ile					245	250	

<210> 512  
 <211> 2015  
 <212> DNA  
 <213> Homo Sapien

<400> 512  
 ggaaaaggta cccgcgagag acagccagca gttctgtgga gcagcgggtgg 50  
 cgggctagga tgggctgtct ctggggtctg gctctgcccc ttttcttctt 100  
 ctgctgggag gttggggtct ctgggagctc tgcaggcccc agcaccgcga 150  
 gaggagacac tgcgatgaca acggacgaca cagaagtgcc cgctatgact 200  
 ctagcaccgg gccacgcgcg tctggaaact caaacgctga gcgctgagac 250  
 ctcttctagg gctcaaccc cagccggccc cattccagaa gcagagacca 300

ggggagccaa gagaatttcc cctgcaagag agaccaggag ttccacaaaa 350  
 acatctccca acttcatggt gctgatcgcc acctccgttg agacatcagc 400  
 cgccagtggc agccccagg gagctggaat gaccacagtt cagaccatca 450  
 caggcagtga tcccaggaa gccatctttg acaccctttg caccgatgac 500  
 agctctgaag aggcaaaagac actcacaatg gacatattga cattggctca 550  
 caactccaca gaagctaagg gctgtcttc agagagcagt gcctcttccg 600  
 acggccccc tccagtcac acccgcac gggcctcaga gacgagcgc 650  
 tcttcgagc gcccccatcc agtcatcac ccgtcacgg cctcagagag 700  
 cagcgctct tccgacggc cccatccagt catcacccc tcattgtccc 750  
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 atcaggtta ttaattgcag catcacaga atagaaacaa caacttccag 850  
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 cctcgtccac ctccgatcca ccagctctgc ctgactccac tgaagcaaaa 950  
 ccacacatca ctgaggtcac agcctctgcc gagaccctgt ccacagccgg 1000  
 caccacagag tcagctgcac ctcatgccac ggttgaggacc caactcccca 1050  
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 agtggagctc tggtcacagt tagcaggaat cccctggaag aaacctcagc 1150  
 cctctctgtt gagacacaa gttacgtcaa agtctcaga gcagctccgg 1200  
 tctcataga ggcctgggca gcagtggga aaacaacttc ctttctggg 1250  
 agctctgctt cctctacag cccctcgga gccgccctc agaactcac 1300  
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 cgagggacga acagcacctt agccaagatc acaacctcag cgaagaccac 1450  
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 gggcagcatg tccaagcccc taaccccaga tgtggcaaca ggaccctgc 1850  
 tcacatccac cggagtgtat gtatggggag gggcttcaco tgttcccaga 1900

gggtgctcttg gactcacctt ggcacatggt ctgtgtttca gtaaagagag 1950  
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<210> 513  
 <211> 482  
 <212> PRT  
 <213> Homo Sapien

<400> 513  
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 35 40 45  
 Met Thr Leu Ala Pro Gly His Ala Ala Leu Glu Thr Gln Thr Leu  
 50 55 60  
 Ser Ala Glu Thr Ser Ser Arg Ala Ser Thr Pro Ala Gly Pro Ile  
 65 70 75  
 Pro Glu Ala Glu Thr Arg Gly Ala Lys Arg Ile Ser Pro Ala Arg  
 80 85 90  
 Glu Thr Arg Ser Phe Thr Lys Thr Ser Pro Asn Phe Met Val Leu  
 95 100 105  
 Ile Ala Thr Ser Val Glu Thr Ser Ala Ala Ser Gly Ser Pro Glu  
 110 115 120  
 Gly Ala Gly Met Thr Thr Val Gln Thr Ile Thr Gly Ser Asp Pro  
 125 130 135  
 Glu Glu Ala Ile Phe Asp Thr Leu Cys Thr Asp Asp Ser Ser Glu  
 140 145 150  
 Glu Ala Lys Thr Leu Thr Met Asp Ile Leu Thr Leu Ala His Thr  
 155 160 165  
 Ser Thr Glu Ala Lys Gly Leu Ser Ser Glu Ser Ser Ala Ser Ser  
 170 175 180  
 Asp Gly Pro His Pro Val Ile Thr Pro Ser Arg Ala Ser Glu Ser  
 185 190 195  
 Ser Ala Ser Ser Asp Gly Pro His Pro Val Ile Thr Pro Ser Arg  
 200 205 210  
 Ala Ser Glu Ser Ser Ala Ser Ser Asp Gly Pro His Pro Val Ile  
 215 220 225  
 Thr Pro Ser Trp Ser Pro Gly Ser Asp Val Thr Leu Leu Ala Glu  
 230 235 240  
 Ala Leu Val Thr Val Thr Asn Ile Glu Val Ile Asn Cys Ser Ile  
 245 250 255

Thr Glu Ile Glu Thr Thr Thr Ser Ser Ile Pro Gly Ala Ser Asp  
 260 265  
 Ile Asp Leu Ile Pro Thr Glu Gly Val Lys Ala Ser Ser Thr Ser  
 275 280 285  
 Asp Pro Pro Ala Leu Pro Asp Ser Thr Glu Ala Lys Pro His Ile  
 290 295 300  
 Thr Glu Val Thr Ala Ser Ala Glu Thr Leu Ser Thr Ala Gly Thr  
 305 310 315  
 Thr Glu Ser Ala Ala Pro His Ala Thr Val Gly Thr Pro Leu Pro  
 320 325 330  
 Thr Asn Ser Ala Thr Glu Arg Glu Val Thr Ala Pro Gly Ala Thr  
 335 340 345  
 Thr Leu Ser Gly Ala Leu Val Thr Val Ser Arg Asn Pro Leu Glu  
 350 355 360  
 Glu Thr Ser Ala Leu Ser Val Glu Thr Pro Ser Tyr Val Lys Val  
 365 370 375  
 Ser Gly Ala Ala Pro Val Ser Ile Glu Ala Gly Ser Ala Val Gly  
 380 385 390  
 Lys Thr Thr Ser Phe Ala Gly Ser Ser Ala Ser Ser Tyr Ser Pro  
 395 400 405  
 Ser Glu Ala Ala Leu Lys Asn Phe Thr Pro Ser Glu Thr Pro Thr  
 410 415 420  
 Met Asp Ile Ala Thr Lys Gly Pro Phe Pro Thr Ser Arg Asp Pro  
 425 430 435  
 Leu Pro Ser Val Pro Pro Thr Thr Thr Asn Ser Ser Arg Gly Thr  
 440 445 450  
 Asn Ser Thr Leu Ala Lys Ile Thr Thr Ser Ala Lys Thr Thr Met  
 455 460 465  
 Lys Pro Gln Gln Pro Arg Pro Arg Leu Pro Gly Arg Gly Arg Pro  
 470 475 480  
 Gln Thr

<210> 514  
 <211> 2284  
 <212> DNA  
 <213> Homo Sapien

<400> 514  
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 ggcgcggggg tcctctcgac gccagagaga aatctcatca tctgtgcagc 150  
 cttcttaaag caaactaaga ccagaggagg gattatcctt gacctttgaa 200  
 gacccaaact aaactgaaat ttaaatgtt cttcggggga gaaggagct 250

tgacttacac ttggttaata atttgcttcc tgacactaag gctgtctgct 300  
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 gtcactctctt tctaaggga tcaaggcga tgagcccga tatacttcaa 400  
 ctoaagaaga ctgcattaat tcttgctgtt caacaaaaa catatcaggg 450  
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 acccaactgc taccatattt totgtccaa cgaggagacc tgtccattga 550  
 aaccagcaa aggacttatg agttacagga taattacaga ttttccatct 600  
 ttgaccagaa atttgccaag ccaagagtta ccccgaggag attctctctt 650  
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 cttccagccc acagctggcc accacagctc cacctgtaac cactgtcact 1050  
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 tacaactcaa gcaatggcta caacagcagt tctgactacc accttccagg 1150  
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 cagtacggcc ttccatttga aaaatggctt ctatcgggt cctctctctt 1400  
 tgggtctctg ttctcgttga taggcctcgt cctcctgggt agaactctt 1450  
 cggatcact ccgcaggaaa cgttactcaa gactggatta ttgatcaat 1500  
 gggatctatg tggacatcta aggatggaac tcggtgtctc ttaattcatt 1550  
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 tttttttttt ggagacagag tcttgctctg ttgccaggc tggagtgcag 1700  
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 acacctgggt gatttttga ttttttagtag agacggggtt tcacatggt 1850



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 cccaaagtgc tgggattaca ggcattgagcc accacagctg gcccccctct 1950  
 gttttatggt tgggttttga gaaggaatga agtgggaacc aaattaggtta 2000  
 attttgggta atctgtctct aaaatattag ctaaaaacaa agctctatgt 2050  
 aaagtaataa agtataattg ccatataaat ttcaaaatto aactggcttt 2100  
 tatgcaaaga aacagggttag gacatctagg ttccaattca ttcacattct 2150  
 tggttccaga taaaatcaac tgtttatatc aatttctaag ggatttgctt 2200  
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 aattaaatat ttgaataaat cttttgttac tcaa 2284

<210> 515

<211> 431

<212> PRT

<213> Homo Sapien

<400> 515

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Ile	Cys	Phe	Leu	Thr	Leu	Arg	Leu	Ser	Ala	Ser	Gln	Asn	Cys
			20					25					30
Lys	Lys	Ser	Leu	Glu	Asp	Val	Val	Ile	Asp	Ile	Gln	Ser	Ser
			35					40					45
Ser	Lys	Gly	Ile	Arg	Gly	Asn	Glu	Pro	Val	Tyr	Thr	Ser	Thr
			50					55					60
Glu	Asp	Cys	Ile	Asn	Ser	Cys	Cys	Ser	Thr	Lys	Asn	Ile	Ser
			65					70					75
Asp	Lys	Ala	Cys	Asn	Leu	Met	Ile	Phe	Asp	Thr	Arg	Lys	Thr
			80					85					90
Arg	Gln	Pro	Asn	Cys	Tyr	Leu	Phe	Phe	Cys	Pro	Asn	Glu	Glu
			95					100					105
Cys	Pro	Leu	Lys	Pro	Ala	Lys	Gly	Leu	Met	Ser	Tyr	Arg	Ile
			110					115					120
Thr	Asp	Phe	Pro	Ser	Leu	Thr	Arg	Asn	Leu	Pro	Ser	Gln	Glu
			125					130					135
Pro	Gln	Glu	Asp	Ser	Leu	Leu	His	Gly	Gln	Phe	Ser	Gln	Ala
			140					145					150
Thr	Pro	Leu	Ala	His	His	His	Thr	Asp	Tyr	Ser	Lys	Pro	Thr
			155					160					165
Ile	Ser	Trp	Arg	Asp	Thr	Leu	Ser	Gln	Lys	Phe	Gly	Ser	Ser
			170					175					180
His	Leu	Glu	Lys	Leu	Phe	Lys	Met	Asp	Glu	Ala	Ser	Ala	Gln
			185					190					195

Leu Ala Tyr Lys Glu Lys Gly His Ser Gln Ser Ser Gln Phe Ser  
 200 205  
 Ser Asp Gln Glu Ile Ala His Leu Leu Pro Glu Asn Val Ser Ala  
 215 220 225  
 Leu Pro Ala Thr Val Ala Val Ala Ser Pro His Thr Thr Ser Ala  
 230 235 240  
 Thr Pro Lys Pro Ala Thr Leu Leu Pro Thr Asn Ala Ser Val Thr  
 245 250 255  
 Pro Ser Gly Thr Ser Gln Pro Gln Leu Ala Thr Thr Ala Pro Pro  
 260 265 270  
 Val Thr Thr Val Thr Ser Gln Pro Pro Thr Thr Leu Ile Ser Thr  
 275 280 285  
 Val Phe Thr Arg Ala Ala Ala Thr Leu Gln Ala Met Ala Thr Thr  
 290 295 300  
 Ala Val Leu Thr Thr Thr Phe Gln Ala Pro Thr Asp Ser Lys Gly  
 305 310 315  
 Ser Leu Glu Thr Ile Pro Phe Thr Glu Ile Ser Asn Leu Thr Leu  
 320 325 330  
 Asn Thr Gly Asn Val Tyr Asn Pro Thr Ala Leu Ser Met Ser Asn  
 335 340 345  
 Val Glu Ser Ser Thr Met Asn Lys Thr Ala Ser Trp Glu Gly Arg  
 350 355 360  
 Glu Ala Ser Pro Gly Ser Ser Ser Gln Gly Ser Val Pro Glu Asn  
 365 370 375  
 Gln Tyr Gly Leu Pro Phe Glu Lys Trp Leu Leu Ile Gly Ser Leu  
 380 385 390  
 Leu Phe Gly Val Leu Phe Leu Val Ile Gly Leu Val Leu Leu Gly  
 395 400 405  
 Arg Ile Leu Ser Glu Ser Leu Arg Arg Lys Arg Tyr Ser Arg Leu  
 410 415 420  
 Asp Tyr Leu Ile Asn Gly Ile Tyr Val Asp Ile  
 425 430

<210> 516  
 <211> 2749  
 <212> DNA  
 <213> Homo Sapien

<220>  
 <221> unsure  
 <222> 1869, 1887  
 <223> unknown base

<400> 516  
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gcgggttcga aggggacact gtgtccctgc agtgcaccta caggggaag 150  
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<210> 517

<211> 332

<212> PRT

<213> Homo Sapien

<400> 517

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			20						25				30
Asp	Thr	Val	Ser	Leu	Gln	Cys	Thr	Tyr	Arg	Glu	Glu	Leu	Arg
			35						40				45
His	Arg	Lys	Tyr	Trp	Cys	Arg	Lys	Gly	Gly	Ile	Leu	Phe	Ser
			50						55				60
Cys	Ser	Gly	Thr	Ile	Tyr	Ala	Glu	Glu	Glu	Gly	Gln	Glu	Thr
			65						70				75

Lys Gly Arg Val Ser Ile Arg Asp Ser Arg Gln Glu Leu Ser Leu  
 80 85  
 Ile Val Thr Leu Trp Asn Leu Thr Leu Gln Asp Ala Gly Glu Tyr  
 95 100 105  
 Trp Cys Gly Val Glu Lys Arg Gly Pro Asp Glu Ser Leu Leu Ile  
 110 115 120  
 Ser Leu Phe Val Phe Pro Gly Pro Cys Cys Pro Pro Ser Pro Ser  
 125 130 135  
 Pro Thr Phe Gln Pro Leu Ala Thr Thr Arg Leu Gln Pro Lys Ala  
 140 145 150  
 Lys Ala Gln Gln Thr Gln Pro Pro Gly Leu Thr Ser Pro Gly Leu  
 155 160 165  
 Tyr Pro Ala Ala Thr Thr Ala Lys Gln Gly Lys Thr Gly Ala Glu  
 170 175 180  
 Ala Pro Pro Leu Pro Gly Thr Ser Gln Tyr Gly His Glu Arg Thr  
 185 190 195  
 Ser Gln Tyr Thr Gly Thr Ser Pro His Pro Ala Thr Ser Pro Pro  
 200 205 210  
 Ala Gly Ser Ser Arg Pro Pro Met Gln Leu Asp Ser Thr Ser Ala  
 215 220 225  
 Glu Asp Thr Ser Pro Ala Leu Ser Ser Gly Ser Ser Lys Pro Arg  
 230 235 240  
 Val Ser Ile Pro Met Val Arg Ile Leu Ala Pro Val Leu Val Leu  
 245 250 255  
 Leu Ser Leu Leu Ser Ala Ala Gly Leu Ile Ala Phe Cys Ser His  
 260 265 270  
 Leu Leu Leu Trp Arg Lys Glu Ala Gln Gln Ala Thr Glu Thr Gln  
 275 280 285  
 Arg Asn Glu Lys Phe Trp Leu Ser Arg Leu Thr Ala Glu Glu Lys  
 290 295 300  
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<210> 518

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 518

ccctgcagtg cacctacag gaag 24

<210> 519

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 519

ctgtcttccc ctgcttggt gtgg 24

<210> 520

<211> 47

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 520

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<210> 521

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 521

ccagtgacac gcaggcaacg aagc 24

<210> 522

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 522

actaggctgt atgcctgggt gggc 24

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<223> Synthetic oligonucleotide probe

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<210> 524

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe  
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<210> 525  
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<210> 526  
<211> 24  
<212> DNA  
<213> Artificial Sequence  
  
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<223> Synthetic oligonucleotide probe  
  
<400> 526  
tatcccaatg cctcccccact gctc 24  
  
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<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 527  
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<211> 30  
<212> DNA  
<213> Artificial Sequence  
  
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<223> Synthetic oligonucleotide probe  
  
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<212> DNA  
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<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 529  
gaagcaagtg cccagctc 18  
  
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<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 530

egggtccctg ctcttttg 18

<210> 531

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 531

caccgtagct gggagcgcac tcac 24

<210> 532

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 532

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